

**EXHIBIT 51**  
**[FILED UNDER SEAL]**

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IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
SHERMAN DIVISION

THE STATE OF TEXAS, et  
al.,

Plaintiffs,

- against -

GOOGLE LLC,

Defendant.

Case No.

4:20-cv-00957-SD

\*\*\*\*\*

HIGHLY CONFIDENTIAL ORAL AND VIDEOTAPED DEPOSITION OF

JOSHUA GANS

OCTOBER 10, 2024

\*\*\*\*\*

ORAL AND VIDEOTAPED DEPOSITION of JOSHUA GANS,  
produced as a witness at the instance of the  
Defendant, and duly sworn, was taken in the  
above-styled and numbered cause on October 10, 2024,  
from 9:00 a.m. to 7:35 p.m., before Mendy A.  
Schneider, CSR, RPR, in and for the State of Texas,  
recorded by machine shorthand, at the offices of  
NORTON ROSE FULBRIGHT, 1550 Lamar, Suite 2000,  
Houston, Texas, pursuant to the Federal Rules of Civil  
Procedure and the provisions stated on the record or  
attached hereto; that the deposition shall be read and  
signed.

Job No. CS6922874

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<p>1 APPEARANCES</p> <p>2 FOR THE PLAINTIFF:</p> <p>3 GERALDINE YOUNG (Real-time)</p> <p>4 MARISA MADARAS BONAPARTE (Real-time)</p> <p>5 ABRAHAM CHANG (via Real-time)</p> <p>6 NORTON ROSE FULBRIGHT</p> <p>7 1550 Lamar, Suite 2000</p> <p>8 Houston, Texas 77010</p> <p>9 Geraldine.young@nortonrosefulbright.com</p> <p>10 RYAN ELLIS (Real-time)</p> <p>11 ZEKE DEROSE (Remote)</p> <p>12 ALEXANDRA ABSTON, ESQ. (via Real-time)</p> <p>13 THE LANIER LAW FIRM, PC</p> <p>14 10940 West Sam Houston Parkway North, Suite 100</p> <p>15 Houston, Texas 77064</p> <p>16 ryan.ellis@lanierlawfirm.com</p> <p>17 Zeke.deroser@lanierlawfirm.com</p> <p>18 FOR THE DEFENDANT:</p> <p>19 ANDREW J. EWALT (Real-time)</p> <p>20 LAURA ONKEN (Real-time)</p> <p>21 FRESHFIELDS BRUCKHAUS DERINGER</p> <p>22 700 13th Street, NW, 10th Floor</p> <p>23 Washington, DC 10005</p> <p>24 202.777.4500</p> <p>25 andrew.ewalt@freshfields.com</p> <p>VERONICA M. BOSCO (Real-time)</p> <p>FRESHFIELDS BRUCKHAUS DERINGER</p> <p>3 World Trade Center</p> <p>New York, New York 10007</p> <p>veronica.bosco@freshfields.com</p> <p>MICHAEL DAVIS, ESQ.</p> <p>GIBBS &amp; BRUNS LLP</p> <p>1100 Louisiana, Suite 5300</p> <p>Houston, Texas 77002</p> <p>mdavis@gibbsbruns.com</p>	<p>1 EXAMINATION INDEX</p> <p>2 WITNESS: JOSHUA GANS</p> <p>3 EXAMINATION PAGE</p> <p>4 BY MR. EWALT 6</p> <p>5 BY MS. YOUNG 266</p> <p>6 FURTHER EXAMINATION</p> <p>7 BY MR. EWALT 277</p> <p>8 BY MS. YOUNG 283</p> <p>9 SIGNATURE REQUESTED 286</p> <p>10 REPORTER'S CERTIFICATION 287</p> <p>11 EXHIBIT INDEX</p> <p>12 PAGE</p> <p>13 GANS EXHIBIT NO. 1 6</p> <p>14 Opening Expert Report</p> <p>15 GANS EXHIBIT NO. 2 6</p> <p>16 Rebuttal Report</p> <p>17 GANS EXHIBIT NO. 3 6</p> <p>18 Errata Sheet</p> <p>19 GANS EXHIBIT NO. 4 66</p> <p>20 E-mail</p> <p>21 GANS EXHIBIT NO. 5 90</p> <p>22 Professor Baye's Report</p> <p>23 GANS EXHIBIT NO. 6 93</p> <p>24 Demand Elasticity on AdX Web Publishers</p> <p>25 GANS EXHIBIT NO. 7 112</p> <p>PowerPoint</p> <p>GANS EXHIBIT NO. 8 138</p> <p>Professor Baye's Surrebuttal Report</p> <p>GANS EXHIBIT NO. 9 222</p> <p>PowerPoint</p> <p>GANS EXHIBIT NO. 10 226</p> <p>Project Bernanke Quantitative Easing on the Ad Exchange</p>
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<p>1 APPEARANCES (CONTINUED)</p> <p>2 ALSO PRESENT:</p> <p>3 DAN LAPEYROUSE, The Videographer</p> <p>4 TREVOR YOUNG (via Zoom)</p> <p>5 BRIAN RICHTER (via Zoom)</p> <p>6 JONATHAN JAFFE (Real-time and Zoom)</p> <p>7 LUKE WOODWARD (via Real-time)</p> <p>8 WILLIAM SHIEBER (via Real-time)</p> <p>9</p> <p>10</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p>	<p>1 EXHIBIT INDEX (CONTINUED) PAGE</p> <p>2 GANS EXHIBIT NO. 11 235</p> <p>3 Overall Pub Yields with DRS v2</p> <p>4 GANS EXHIBIT NO. 12 238</p> <p>5 PRD/Strat Review: Network Health</p> <p>6 GANS EXHIBIT NO. 13 241</p> <p>7 E-mail</p> <p>8 GANS EXHIBIT NO. 14 259</p> <p>9 Declaration of [REDACTED]</p> <p>10 (REPORTER'S NOTE: All quotations from exhibits are reflected in the manner in which they were read into the record and do not necessarily denote an exact quote from the document.)</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p>

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<p>1 THE VIDEOGRAPHER: Okay. We're now on</p> <p>2 the record. Today is October 10, 2024. The time is</p> <p>3 approximately 9:00 a.m. This is Video 1 of</p> <p>4 Joshua Gans.</p> <p>5 Will reporter please swear in the</p> <p>6 witness.</p> <p>7 JOSHUA GANS,</p> <p>8 having been first duly sworn, testified as follows:</p> <p>9 E X A M I N A T I O N</p> <p>10 BY MR. EWALT:</p> <p>11 Q. Good morning, Professor Gans.</p> <p>12 Would you please state and spell your</p> <p>13 name for the record.</p> <p>14 A. Yes. My name is Joshua Gans, J-O-S-H-U-A</p> <p>15 G-A-N-S.</p> <p>16 Q. I'm handing you what's been marked as</p> <p>17 Exhibits 1, 2, and 3.</p> <p>18 (Marked Gans Exhibit Nos. 1 through 3.)</p> <p>19 Q. (BY MR. EWALT) Can you take a moment just to</p> <p>20 look over those.</p> <p>21 A. Yes.</p> <p>22 Q. Is Exhibit 1 your opening expert report in</p> <p>23 this case?</p> <p>24 A. Yes.</p> <p>25 Q. Is Exhibit 2 your rebuttal report in this</p>	<p>1 revenues using the numerator. The numerator applies a</p> <p>2 broad definition.</p> <p>3 You'll notice that the word "numerator"</p> <p>4 is used twice. The second one should have been</p> <p>5 denominator.</p> <p>6 Q. Okay. Thank you.</p> <p>7 A. And, also, with respect to Figure 7, I can't</p> <p>8 remember exactly which page it was but I'll just tell</p> <p>9 you now.</p> <p>10 There was -- there was -- there should</p> <p>11 have been a footnote that explained where Figure 7</p> <p>12 came from. I don't have the footnote with me at the</p> <p>13 moment, but we can supply it.</p> <p>14 Q. Great. And you'll be able to supply the</p> <p>15 footnote --</p> <p>16 A. Yes.</p> <p>17 Q. -- later today or before the deposition is</p> <p>18 up?</p> <p>19 MS. YOUNG: Yes.</p> <p>20 MR. EWALT: Great.</p> <p>21 A. Those are the only ones that I've noticed or</p> <p>22 that I recall at the moment.</p> <p>23 Q. (BY MR. EWALT) All right. Thank you.</p> <p>24 When did you start working on this case?</p> <p>25 A. I was engaged as an expert in 2021.</p>
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<p>1 case?</p> <p>2 A. Yes.</p> <p>3 Q. Is Exhibit 3 an errata sheet to your opening</p> <p>4 report dated July 24, 2024?</p> <p>5 A. Yes.</p> <p>6 Q. Do your opening report and rebuttal report</p> <p>7 contain all of the opinions that you are offering in</p> <p>8 this case?</p> <p>9 A. Yes.</p> <p>10 MS. YOUNG: Objection; form. Sorry.</p> <p>11 Mr. Gans, let me object before you</p> <p>12 answer.</p> <p>13 Q. (BY MR. EWALT) Do your opening report and</p> <p>14 rebuttal report contain all of the bases for the</p> <p>15 opinions that you are offering in this case?</p> <p>16 A. Yes.</p> <p>17 Q. Apart from what's addressed in the errata,</p> <p>18 are there any parts of your -- of your opening report</p> <p>19 or your rebuttal report that you would like to change?</p> <p>20 A. There's nothing in my opening report. There</p> <p>21 were a couple of things that I did notice in my</p> <p>22 rebuttal report.</p> <p>23 I -- I -- I noticed a typo on</p> <p>24 Paragraph 18, right at the last part of it, where it</p> <p>25 is said that -- well, he only accounts for AdX</p>	<p>1 Q. September 2021. Does that sound about right?</p> <p>2 A. Yeah. I think it's in my opening report, the</p> <p>3 exact date.</p> <p>4 Q. Yeah. Paragraph 2 of your opening report?</p> <p>5 A. Right, right. Yeah. That's -- well, that's</p> <p>6 the date I was retained, yes.</p> <p>7 Q. Did you do any work before you were retained?</p> <p>8 A. In preparing a report or in relation to this</p> <p>9 matter?</p> <p>10 Q. In -- did you do any work in relation to this</p> <p>11 matter before September 2021?</p> <p>12 A. I did provide some --</p> <p>13 MS. YOUNG: Professor Gans, I'm going to</p> <p>14 caution you not to disclose any communications you had</p> <p>15 with counsel in this case because those are not</p> <p>16 discoverable under the expert stipulation.</p> <p>17 THE WITNESS: Okay.</p> <p>18 Q. (BY MR. EWALT) I just asked if you did any</p> <p>19 work --</p> <p>20 A. Yes.</p> <p>21 Q. -- in the matter prior to September 2021?</p> <p>22 A. Yes.</p> <p>23 Q. Okay. When did you start working on this</p> <p>24 matter?</p> <p>25 MS. YOUNG: Objection; form.</p>

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<p>1 Go ahead.</p> <p>2 A. That would be approximately a year earlier.</p> <p>3 Q. (BY MR. EWALT) Okay. Approximately how many</p> <p>4 hours have you worked on this matter from when you</p> <p>5 started until today?</p> <p>6 A. It's been a number of years. I don't</p> <p>7 remember the exact amount but it would be several</p> <p>8 hundred.</p> <p>9 Q. And you're getting paid a thousand dollars</p> <p>10 per hour for your work on the matter?</p> <p>11 A. For -- yes, for my billable hours.</p> <p>12 Q. Approximately how much have you been paid in</p> <p>13 all for your work in this matter?</p> <p>14 A. I don't -- I don't -- I don't know the exact</p> <p>15 amount because I don't know the hours.</p> <p>16 Q. More than a million dollars?</p> <p>17 A. Oh, no, I don't believe so.</p> <p>18 Q. More than \$500,000?</p> <p>19 A. It's over four years, so I'm not sure</p> <p>20 exactly.</p> <p>21 Q. Do you know whether it's more or less than</p> <p>22 \$500,000 --</p> <p>23 (Speaking simultaneously.)</p> <p>24 A. I can't tell you what it is.</p> <p>25 (Discussion off the record.)</p>	<p>1 remember the parties because it was back -- it was</p> <p>2 almost back in 2007 or so. And one of the parties was</p> <p>3 a company called Digene. And I can't remember the</p> <p>4 other party, which is a shame, because they were my</p> <p>5 client.</p> <p>6 Q. The other party was your client?</p> <p>7 A. Yes.</p> <p>8 Q. Okay. Apart from that matter in 2007</p> <p>9 involving Digene, has a U.S. court ever qualified you</p> <p>10 as an expert witness in an antitrust case?</p> <p>11 MS. YOUNG: Objection; form.</p> <p>12 A. So what do you mean by "qualified"?</p> <p>13 I have -- I've been deposed in antitrust</p> <p>14 cases.</p> <p>15 Q. (BY MR. EWALT) Sure.</p> <p>16 Did you -- I'm referring to you testifying at</p> <p>17 a trial --</p> <p>18 A. Oh, at a trial.</p> <p>19 Q. -- as an expert witness?</p> <p>20 A. At a trial. No, I have not testified as a --</p> <p>21 at an actual trial that resulted in -- from a U.S.</p> <p>22 antitrust case.</p> <p>23 Q. Okay. Have you been deposed in U.S.</p> <p>24 antitrust cases prior to this case?</p> <p>25 A. Yes.</p>
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<p>1 Q. (BY MR. EWALT) Do you know whether it was</p> <p>2 more or less than \$500,000 that you've been paid on</p> <p>3 this matter since you started work?</p> <p>4 A. I do not know.</p> <p>5 Q. What is your best estimate of the amount that</p> <p>6 you've been paid for your work on this matter since</p> <p>7 you started?</p> <p>8 A. Oh, boy. My best estimate, I really need to</p> <p>9 know the number of hours that I've worked exactly to</p> <p>10 provide that. So if it was 300 hours, which it could</p> <p>11 have been, then 300,000.</p> <p>12 Q. Is 300 -- 300 hours your best estimate of the</p> <p>13 amount of time you spent on this matter?</p> <p>14 MS. YOUNG: Objection; form.</p> <p>15 You may answer.</p> <p>16 A. I was just giving an example. I really don't</p> <p>17 have the exact number.</p> <p>18 Q. (BY MR. EWALT) Have you ever -- excuse me.</p> <p>19 Strike that.</p> <p>20 Has a U.S. court ever qualified you as an</p> <p>21 expert in an antitrust case?</p> <p>22 MS. YOUNG: Objection; form.</p> <p>23 A. Yes.</p> <p>24 Q. (BY MR. EWALT) Okay. Which case?</p> <p>25 A. There was a case -- I'm now trying to</p>	<p>1 Q. And one of those was the Digene case?</p> <p>2 A. One of those was the Digene case.</p> <p>3 Another one was a case against Meta.</p> <p>4 Q. When was that case?</p> <p>5 A. That -- that deposition was last year.</p> <p>6 Q. In the Digene case, what was the nature of</p> <p>7 your testimony?</p> <p>8 A. I'm trying to recall, but I believe -- I</p> <p>9 believe that it was with respect to a characterization</p> <p>10 of conduct that violated, and you'll forgive me if --</p> <p>11 I'm not sure if it was just Section 2 of the Sherman</p> <p>12 antitrust case. There might have been others as well.</p> <p>13 Q. Did you reach any conclusions about market</p> <p>14 definition in that case?</p> <p>15 A. I would have, but I don't recall the case</p> <p>16 enough.</p> <p>17 Q. Okay. What were the nature of your opinions</p> <p>18 in the Meta case?</p> <p>19 A. The nature of my opinions in the Meta case</p> <p>20 was -- it was -- what was the nature of my --</p> <p>21 MS. YOUNG: And I'll caution you that</p> <p>22 that case might have been governed by a protective</p> <p>23 order. So if you have any concerns about violating a</p> <p>24 protective order --</p> <p>25 THE WITNESS: Right, right.</p>

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<p>1 MS. YOUNG: -- any confidentiality with 2 respect to -- 3 THE WITNESS: Right. 4 MS. YOUNG: -- Meta's information -- 5 yeah -- let me speak. Yeah. Happy to discuss those, 6 but I want to caution you with respect to that. 7 You may answer now. 8 A. I -- I've been doing this case for a bit, and 9 I have -- I'm -- I'm -- I'm trying to remember exactly 10 what my report was in the Meta case. It wasn't a very 11 long report on a matter -- on the matter at hand, and 12 I just can't remember what my assignment was for that 13 one. 14 Q. (BY MR. EWALT) Fair enough. 15 Switch gears and talk about market definition. 16 What is the purpose of market definition? 17 MS. YOUNG: Objection; form. 18 Go ahead. 19 A. It depends on the nature of the claims in an 20 antitrust action. 21 Q. (BY MR. EWALT) All right. In a 22 monopolization case, what is the purpose of market 23 definition? 24 A. It is to understand the nature of the markets 25 that were directly impacted on -- by the conduct that</p>	<p>1 have binders, and there are the reports. It might be 2 easier for him to flip through. 3 MR. EWALT: That's fine. 4 MS. YOUNG: And -- and I just -- 5 MR. EWALT: Let's just go off the 6 record. 7 MS. YOUNG: Yeah. 8 THE VIDEOGRAPHER: We're now going off 9 the record. The time is approximately 9:12. 10 (Break from 9:12 a.m. to 9:13 a.m.) 11 THE VIDEOGRAPHER: Now back on the 12 record. The time is approximately 9:13. 13 Q. (BY MR. EWALT) Professor Gans, do you have in 14 front of you a binder that is a copy of Exhibit 1? 15 A. Yes. 16 Q. And is there also a binder in front of you 17 that is a copy of your rebuttal report that is 18 Exhibit 2? 19 A. Yes. 20 Q. Okay. And that's fine if you want to use the 21 binder throughout the course of the day today. Or 22 either binder that is. 23 Would you please turn to Paragraph 127 24 of your opening report that's Exhibit 1. 25 A. Yes.</p>
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<p>1 is under investigation. 2 Q. Is it fair to say that the -- one of the 3 purposes of market definition is to identify in the 4 areas to test whether a particular conduct has 5 competitive effects? 6 MS. YOUNG: Objection; form. 7 A. That would be fair. 8 Q. (BY MR. EWALT) When you define "markets" in 9 this case, did you examine the Brown Shoe factors? 10 A. I did. 11 Q. When you define "markets" in this case, did 12 you use the hypothetical monopolist test? 13 A. I applied the hypothetical monopolist case -- 14 test. 15 Q. Other than the Brown Shoe factors and the 16 hypothetical monopolist test, did you use any other 17 methods to define -- define markets in this case? 18 A. No. Those capture that. 19 Q. All right. Let's start with the Brown Shoe 20 factors, then. 21 Would you please turn to Page 127 of 22 Exhibit 1. I'm sorry, Paragraph 127. 23 A. I'm going to -- I'm going to unbind this. 24 You've got it in a binder there. 25 MS. YOUNG: Can I make a suggestion? We</p>	<p>1 Q. Is that the paragraph where you discuss the 2 Brown Shoe factors? 3 A. Yes, this is a paragraph that I do discuss 4 them in. 5 Q. Do the Brown Shoe factors come from a U.S. 6 Supreme Court case? 7 A. Yes. 8 Q. Do the Brown Shoe factors constitute an 9 economic methodology for defining a relevant market? 10 A. They -- they constitute a set of criteria 11 that economists would agree is -- are indicative of 12 being a -- a relevant market. 13 Q. Can you recall reading any articles in 14 peer-reviewed economic journals that discuss the Brown 15 Shoe factors? 16 A. I have read some. You know, one that I cite 17 in that paragraph is an article by Jonathan Baker, but 18 there are others that I have read in my career. 19 Q. And the article by Jonathan Baker is 20 published in the Antitrust Law Journal? 21 A. Yes. 22 Q. Are you aware of any articles published in 23 economic journals that discuss the Brown Shoe factors? 24 A. Well, the Brown Shoe factors are -- come from 25 the legal scholar -- the legal -- the legal precedent.</p>

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<p style="text-align: right;">Page 18</p> <p>1 I don't -- I don't recall any that directly discuss</p> <p>2 the Brown Shoe factors as a whole.</p> <p>3 Q. Have you ever taught an economics class about</p> <p>4 the Brown Shoe factors?</p> <p>5 MS. YOUNG: Objection; form.</p> <p>6 A. I have taught economic classes on antitrust</p> <p>7 and at times have -- have referred to those factors.</p> <p>8 Q. (BY MR. EWALT) Do the Brown Shoe factors help</p> <p>9 organize qualitative evidence that may be relevant to</p> <p>10 defining a market?</p> <p>11 MS. YOUNG: Objection; form.</p> <p>12 A. I think they help organize evidence that</p> <p>13 would be related to a market.</p> <p>14 Q. (BY MR. EWALT) And do they help organize</p> <p>15 qualitative evidence?</p> <p>16 A. That would include qualitative evidence.</p> <p>17 Q. Are the Brown Shoe factors a starting point</p> <p>18 for market definition?</p> <p>19 MS. YOUNG: Objection; form.</p> <p>20 A. They are one starting point you could use.</p> <p>21 Q. (BY MR. EWALT) After considering the Brown</p> <p>22 Shoe factors, should an economist undertake a deeper</p> <p>23 examination before reaching conclusions about market</p> <p>24 definition?</p> <p>25 MS. YOUNG: Objection; form.</p>	<p style="text-align: right;">Page 20</p> <p>1 have organized the evidence solely on the Brown Shoe</p> <p>2 factors.</p> <p>3 Q. (BY MR. EWALT) Are you referring to the price</p> <p>4 sensitivity factor in Brown Shoe?</p> <p>5 A. Yes, I am.</p> <p>6 Q. And I just want to make sure I understand</p> <p>7 what you're saying.</p> <p>8 Are you saying that the price</p> <p>9 sensitivity factor standing alone would have been</p> <p>10 enough for you to reach reliable conclusions about</p> <p>11 market definition in this case?</p> <p>12 MS. YOUNG: Objection; form.</p> <p>13 A. I -- I don't tend to think of it in that way.</p> <p>14 Q. (BY MR. EWALT) How do you think about it?</p> <p>15 A. What I'm trying to understand is the conduct</p> <p>16 at issue. And the firm that was engaging in that</p> <p>17 conduct. And what the set of constraints were</p> <p>18 competitively on the firm in doing that.</p> <p>19 And I am trying to do so in a way that</p> <p>20 is economic, to use the literal meaning of the word,</p> <p>21 in terms of assembling evidence and allowing the court</p> <p>22 to make determinations on other things that are</p> <p>23 required to understand the effects of such conduct.</p> <p>24 Q. When defining markets in this case, did you</p> <p>25 examine evidence of unique production facilities?</p>
<p style="text-align: right;">Page 19</p> <p>1 A. I think that an economist needs to undertake</p> <p>2 whatever investigations are necessary to be confident</p> <p>3 in their conclusion.</p> <p>4 Q. (BY MR. EWALT) Could you be confident in your</p> <p>5 conclusions relying solely on the Brown Shoe factors</p> <p>6 in defining a market?</p> <p>7 A. It would depend on the case and the nature of</p> <p>8 the evidence available.</p> <p>9 Q. Have you ever defined a market in an</p> <p>10 antitrust case relying solely on the Brown Shoe</p> <p>11 factors?</p> <p>12 A. I don't believe so.</p> <p>13 Q. Can an economist reach reliable conclusions</p> <p>14 about market definition based solely on consideration</p> <p>15 of the Brown Shoe factors?</p> <p>16 MS. YOUNG: Objection; form.</p> <p>17 A. Depending on the case, it may be possible.</p> <p>18 Q. (BY MR. EWALT) In this case, could you have</p> <p>19 reached reliable conclusions about market definition</p> <p>20 based solely on consideration of the Brown Shoe</p> <p>21 factors?</p> <p>22 MS. YOUNG: Objection; form.</p> <p>23 A. I think as one of the Brown Shoe factors</p> <p>24 relates to the nature of substitutes available to</p> <p>25 customers in -- in this industry. I think I could</p>	<p style="text-align: right;">Page 21</p> <p>1 MS. YOUNG: Objection; form.</p> <p>2 A. I considered the criteria of unique</p> <p>3 production facilities.</p> <p>4 Q. (BY MR. EWALT) And how did you consider that</p> <p>5 criteria?</p> <p>6 A. I thought about the nature of this industry</p> <p>7 and the nature of the product and how production</p> <p>8 occurs in this industry to work out if consideration</p> <p>9 of that factor would be of use in defining the market.</p> <p>10 Q. And how -- what did you conclude as to</p> <p>11 whether the factor of unique production facilities</p> <p>12 would be useful in defining a market in this case?</p> <p>13 A. The terminology that the Supreme Court used</p> <p>14 was of an age that the term "unique production</p> <p>15 facilities" wasn't particularly helpful in defining</p> <p>16 industry that is effectively an industry grounded in</p> <p>17 information technology.</p> <p>18 Q. So is it your view that the unique production</p> <p>19 facilities factor is not helpful in defining a market</p> <p>20 in this case?</p> <p>21 A. I did not find it helpful as a way of -- of</p> <p>22 sorting and classifying the evidence.</p> <p>23 Q. And you did not discuss the factor of unique</p> <p>24 production facilities in either of your reports,</p> <p>25 correct?</p>



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<p style="text-align: right;">Page 22</p> <p>1 MS. YOUNG: Objection; form.</p> <p>2 A. I believe I discussed it in my rebuttal</p> <p>3 report, Exhibit 2.</p> <p>4 Q. (BY MR. EWALT) Yeah. You may take a look at</p> <p>5 Paragraph 82.</p> <p>6 A. Okay. Yes. In Paragraph 82 is the paragraph</p> <p>7 I discussed it.</p> <p>8 Q. And in that paragraph, you discuss that it's</p> <p>9 not -- not helpful to consideration, correct?</p> <p>10 A. That is correct.</p> <p>11 Q. Beyond stating an opinion that it's not</p> <p>12 helpful to consider, did you otherwise discuss unique</p> <p>13 production facilities in your evaluation of the</p> <p>14 relevant markets in this case?</p> <p>15 A. I did not. This is where I, in response to</p> <p>16 Professor Baye, arguing otherwise -- I think arguing</p> <p>17 otherwise -- I made a response as to what my</p> <p>18 consideration was that we've just gone through.</p> <p>19 Q. When defining markets in this case, did you</p> <p>20 examine evidence of distinct customers?</p> <p>21 A. We have this page of the report open. I did</p> <p>22 consider -- I did -- I did consider whether that would</p> <p>23 be useful, but I -- I -- I -- I didn't classify them</p> <p>24 in how I wrote my report as a factor. I didn't find</p> <p>25 that classification useful relative to the discussion</p>	<p style="text-align: right;">Page 24</p> <p>1 sell other products?</p> <p>2 A. Oh, yes.</p> <p>3 Q. Can some publisher ad servers for open web</p> <p>4 display advertising also be used to serve in-app</p> <p>5 advertising?</p> <p>6 A. Yes, they can.</p> <p>7 Q. Can some publishers ad servers for open web</p> <p>8 display advertising also be used to serve video ads?</p> <p>9 A. The -- the suppliers of them, yes.</p> <p>10 Q. Do some vendors of ad exchanges also sell</p> <p>11 other products?</p> <p>12 MS. YOUNG: Objection; form.</p> <p>13 A. Yes.</p> <p>14 Q. (BY MR. EWALT) Can some ad exchanges for</p> <p>15 transacting open web display advertising also be used</p> <p>16 to transact in-app advertising?</p> <p>17 A. Yes, I believe they can.</p> <p>18 Q. Can some ad exchanges for transacting open</p> <p>19 web display advertising also be used to transact video</p> <p>20 ads?</p> <p>21 A. Depending on the platform, yes.</p> <p>22 Q. Do some vendors of ad-buying tools for small</p> <p>23 advertisers also sell other products?</p> <p>24 A. Yes.</p> <p>25 MS. YOUNG: Objection; form.</p>
<p style="text-align: right;">Page 23</p> <p>1 I did elsewhere.</p> <p>2 Q. When defining markets in this case, did you</p> <p>3 examine evidence of specialized vendors?</p> <p>4 A. I thought about specialized vendors and I --</p> <p>5 I believe that I discussed it. And I might be not</p> <p>6 recalling correctly at some point in my -- my opening</p> <p>7 report.</p> <p>8 Q. Okay. But you don't recall, as you sit here,</p> <p>9 where in your opening report you discussed it?</p> <p>10 A. Oh, I can probably find it.</p> <p>11 Q. If you want to take a minute.</p> <p>12 A. Yeah. If I did that.</p> <p>13 This is one of those situations where it</p> <p>14 would be nice to have this digitally. Where did I...?</p> <p>15 I may not have listed the -- the -- the</p> <p>16 vendors in the market participants under that criteria</p> <p>17 in my opening report.</p> <p>18 I just can't recall at the moment.</p> <p>19 Q. Okay. So as you sit here, you don't recall</p> <p>20 whether you discussed specialized vendors as part of</p> <p>21 defining a market in this case?</p> <p>22 A. I did not -- I did not -- I don't -- I don't</p> <p>23 recall that being a -- a factor that was given any</p> <p>24 priority in my report.</p> <p>25 Q. Do some vendors of publisher ad servers also</p>	<p style="text-align: right;">Page 25</p> <p>1 Oh, let me object first and then you may</p> <p>2 answer.</p> <p>3 Q. (BY MR. EWALT) Can some ad-buying tools for</p> <p>4 small advertisers for buying open web display</p> <p>5 advertising also be used to buy in-app advertising?</p> <p>6 A. Yes.</p> <p>7 Q. Can some ad-buying tools for small</p> <p>8 advertisers for buying open web display advertising</p> <p>9 also be used to buy video ads?</p> <p>10 A. I'm not 100 percent sure, but possibly.</p> <p>11 Q. Do some vendors of ad-buying tools for large</p> <p>12 advertisers also sell other products?</p> <p>13 MS. YOUNG: Objection; form.</p> <p>14 A. Yes. Yes.</p> <p>15 Q. (BY MR. EWALT) Can some ad-buying tools for</p> <p>16 large advertisers for buying open web display</p> <p>17 advertising also be used to buy in-app advertising?</p> <p>18 A. Yes.</p> <p>19 Q. Can some ad-buying tools for large</p> <p>20 advertisers for buying open web display advertising</p> <p>21 also be used to buy video ads?</p> <p>22 A. Yes.</p> <p>23 Q. And we talked a few minutes ago about how</p> <p>24 you -- maybe we didn't. Let me just start over.</p> <p>25 When defining markets in this case, did</p>



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<p style="text-align: right;">Page 26</p> <p>1 you examine evidence of sensitivity to price changes?</p> <p>2 A. Yes.</p> <p>3 Q. What evidence of sensitivity to price changes</p> <p>4 did you examine?</p> <p>5 A. There was a lot. Can you be more specific.</p> <p>6 Q. Sure.</p> <p>7 Would you consider the evidence related</p> <p>8 to sensitivity of price changes that you considered to</p> <p>9 be essentially the same evidence that you used in</p> <p>10 applying the hypothetical monopolist test?</p> <p>11 MS. YOUNG: Objection; form.</p> <p>12 A. Yes.</p> <p>13 Q. (BY MR. EWALT) And when defining markets in</p> <p>14 this case, you examined evidence of distinct prices,</p> <p>15 right?</p> <p>16 A. Yes.</p> <p>17 Q. How does your analysis of distinct prices</p> <p>18 inform your conclusions about market definition?</p> <p>19 A. Distinct prices allow you to identify</p> <p>20 products that the people could buy or not buy</p> <p>21 independent of other products.</p> <p>22 Q. How does -- well, let me ask you this: What</p> <p>23 do you mean by "distinct prices"?</p> <p>24 A. I mean prices that are wholly determined by</p> <p>25 suppliers into the -- you know, that are chosen by</p>	<p style="text-align: right;">Page 28</p> <p>1 A. I read it -- and this is just my</p> <p>2 interpretation as an economist -- as prices in the</p> <p>3 market -- you're going to like this -- prices in the</p> <p>4 market not being not distinct.</p> <p>5 In other words, if you think about the</p> <p>6 purpose of a definition of -- of market definition,</p> <p>7 one of the things we're trying to understand is what</p> <p>8 constrains the firm at issue, the firm -- the conduct</p> <p>9 in, for instance, their pricing.</p> <p>10 In order to do that, it is often helpful</p> <p>11 to have, in the definition of the market, the</p> <p>12 constraint on pricing be the constraint on the product</p> <p>13 that is being sold in the market. And that is</p> <p>14 distinct from other products that the firm at issue</p> <p>15 might be selling.</p> <p>16 Q. Distinct in what way?</p> <p>17 A. Different. It's -- it's a price for that</p> <p>18 product.</p> <p>19 Q. Let me ask it this way: When you are</p> <p>20 assessing whether prices are distinct, do you consider</p> <p>21 whether prices are charged on the same basis?</p> <p>22 A. Well, let's -- probably the easiest thing to</p> <p>23 do is to look about -- in my report about where I</p> <p>24 discuss that, because I think it will probably be</p> <p>25 indicated to you what I meant by it within the context</p>
<p style="text-align: right;">Page 27</p> <p>1 suppliers into the relevant market but are not chosen</p> <p>2 by suppliers outside the relevant market.</p> <p>3 Q. I'm not following you there.</p> <p>4 Prices are always chosen by suppliers,</p> <p>5 right?</p> <p>6 A. They are, but the way I read the distinct</p> <p>7 prices is to say, if I'm an outside observer and I'm</p> <p>8 trying to understand who is supplying products that</p> <p>9 are -- are into a market, if the products that are</p> <p>10 identified have on them a -- a distinct price -- and</p> <p>11 by "price" meaning something that a consumer has to</p> <p>12 pay that supplier if they consume the product and</p> <p>13 don't have to if they don't consume the product --</p> <p>14 then that is an indicator that the participants in the</p> <p>15 market recognize that those are the products that they</p> <p>16 are selling to the consumer.</p> <p>17 Q. So I understand your definition of price.</p> <p>18 I'm trying to understand your definition of a distinct</p> <p>19 price.</p> <p>20 MS. YOUNG: Is there a question pending?</p> <p>21 Q. (BY MR. EWALT) How do you define a distinct</p> <p>22 price?</p> <p>23 How can you -- strike that.</p> <p>24 How can you tell whether the Brown Shoe factor</p> <p>25 of distinct pricing is satisfied in a particular case?</p>	<p style="text-align: right;">Page 29</p> <p>1 of the example in the -- in the case in the report.</p> <p>2 Q. Okay. We can try.</p> <p>3 So let me direct you to Paragraph 235 of</p> <p>4 your opening report.</p> <p>5 A. Right. So there I talk about there being --</p> <p>6 well, in this case a distinct, independent pricing</p> <p>7 structure.</p> <p>8 MS. YOUNG: I don't think there was a</p> <p>9 question pending.</p> <p>10 MR. EWALT: Okay.</p> <p>11 MS. YOUNG: Yeah. So -- yeah.</p> <p>12 Q. (BY MR. EWALT) So in Paragraphs 235 and 236</p> <p>13 of your opening report, is it fair to say you -- you</p> <p>14 apply the distinct and independent pricing structure</p> <p>15 factor to your candidate market for ad-buying tools</p> <p>16 for small advertisers?</p> <p>17 A. Yes.</p> <p>18 Q. And you reach the conclusion that ad-buying</p> <p>19 tools for small advertisers have a distinct and</p> <p>20 independent pricing structure.</p> <p>21 Is that fair?</p> <p>22 A. Yes.</p> <p>23 Q. And from what is that pricing structure</p> <p>24 distinct?</p> <p>25 A. That if you look at Table 3, it describes</p>

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<p style="text-align: right;">Page 30</p> <p>1 various ad-buying tools to small advertisers that are  2 available in the market and describes the means by  3 which the advertisers are -- were effectively paid --  4 or effectively pay -- sorry -- to -- to -- to -- to  5 pay in the sense of the bids that they offer for which  6 a -- a percentage is the price paid to the provider of  7 the -- the ad-buying tool.  8 Q. Correct. That's what Table 3 describes.  9 A. Yeah.  10 Q. My question to you is: How can you tell  11 whether those are distinct from something else?  12 A. I think this is the case where I am not  13 understanding you.  14 Q. All right. Let me try again.  15 So the word "distinct" suggests a  16 comparison between two things.  17 A. Yes.  18 Q. Would you agree with that?  19 A. Yes.  20 Q. And one of the things that's being compared  21 in Paragraphs 235, 236, and Table 3 of your opening  22 report is the pricing model of display ad campaigns  23 and competing ad-buying tools for small advertisers;  24 is that right?  25 A. Yes.</p>	<p style="text-align: right;">Page 32</p> <p>1 are accepted before they pay out to suppliers, they  2 take out a commission.  3 Q. So you agree that ad exchanges charge a  4 commission?  5 A. Ad exchanges charge -- well, the terminology  6 we've used here is, I guess to be consistent, take  7 rate.  8 Q. Okay.  9 A. That is a percentage of the transaction  10 revenue for completed transactions.  11 Q. All right. I just want to make sure we got a  12 clear record here.  13 A. Yes.  14 Q. So is it your opinion that ad exchanges  15 charge a take rate?  16 A. My opinion is that there's a take rate that  17 accrues to ad exchanges for completed transactions.  18 Q. Is it your opinion that there is a take rate  19 that accrues to small advertiser buying tools for  20 completed transactions?  21 MS. YOUNG: Objection; form.  22 A. There is.  23 Q. (BY MR. EWALT) Is it your opinion that there  24 is a take rate that accrues to large advertiser buying  25 tools for completed transactions?</p>
<p style="text-align: right;">Page 31</p> <p>1 Q. And what are you comparing those pricing  2 models to?  3 A. Oh, I see.  4 What I -- I'm -- when advertisers use  5 those tools and they commit to a payment for ads, the  6 provider of these tools will take an amount of that  7 bid, contingent on the bid being ultimately accepted  8 as a, for want of a better term, commission.  9 And that is the way in which the buy --  10 buyers of ads pay for the use of those tools in  11 submitting those bids.  12 Q. And my question was: How does that  13 commission compare to anything else?  14 MS. YOUNG: Objection; form.  15 You can answer.  16 THE WITNESS: Sorry.  17 A. The commission compares to the commissions of  18 other providers of ad-buying tools.  19 Q. (BY MR. EWALT) So you would agree that  20 providers of ad-buying tools, such as ad exchanges,  21 also charge a commission --  22 MS. YOUNG: Objection; form.  23 Q. (BY MR. EWALT) -- for their services?  24 A. The ad exchangers also on the bids that are  25 submitted to them before those bids -- if those bids</p>	<p style="text-align: right;">Page 33</p> <p>1 MS. YOUNG: Objection; form.  2 A. It is my understanding that there is, yes.  3 Q. (BY MR. EWALT) Can you please explain how you  4 reach a conclusion that there are distinct prices for  5 small advertiser buying tools when a commission  6 accrues to small advertiser buying tools as well as ad  7 exchanges as well as large advertiser buying tools.  8 MS. YOUNG: Objection; form.  9 A. Yes. There -- there are -- those are  10 distinct -- they're distinct prices in the sense that  11 if you were to not use those tools, you would not pay  12 that price.  13 So if you are an advertiser who did not  14 use the small -- or the -- such as something like  15 Google Ads, you would not be paying Google for those  16 ads.  17 Q. (BY MR. EWALT) So is your understanding of  18 the distinct pricing factor such that prices are  19 distinct if customers pay for the product?  20 MS. YOUNG: Objection; form.  21 A. Prices are distinct in the sense that if they  22 do not consume the product, they do not pay that  23 price.  24 Q. (BY MR. EWALT) Can you give me an example of  25 a situation where a customer does not consume the</p>

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<p>1 product but pays the price?</p> <p>2 MS. YOUNG: Objection; form.</p> <p>3 A. I'm trying to think of a clean example that</p> <p>4 doesn't get us far away from this case.</p> <p>5 Can you repeat the question again?</p> <p>6 Sorry.</p> <p>7 Q. (BY MR. EWALT) That's all right. Let's move</p> <p>8 on. Let's talk about the hypothetical monopolist</p> <p>9 test.</p> <p>10 A. Okay. Okay.</p> <p>11 Q. The hypothetical monopolist test is described</p> <p>12 in the DOJ and FTC merger guidelines; is that right?</p> <p>13 A. Yes, they describe it.</p> <p>14 Q. And the merger guidelines reflect sound</p> <p>15 economic principles?</p> <p>16 MS. YOUNG: Objection; form.</p> <p>17 A. Yes.</p> <p>18 Q. (BY MR. EWALT) When you applied the</p> <p>19 hypothetical monopolist test in this case, did you</p> <p>20 depart from the principles in the merger guidelines?</p> <p>21 MS. YOUNG: Objection; form.</p> <p>22 A. I have not evaluated whether -- I know that</p> <p>23 it is described in the merger guidelines. I have not</p> <p>24 evaluated whether my approach was different. I do not</p> <p>25 regard it as such.</p>	<p>1 or products that -- and this is where the Brown Shoe</p> <p>2 factors and the hypothetical monopolist test come</p> <p>3 together -- ones that people recognize as being the</p> <p>4 same sort of product, et cetera.</p> <p>5 And I say, if the firm in question and</p> <p>6 the suppliers of those products identified got</p> <p>7 together and formed a cartel and acted as a</p> <p>8 monopolist, could they raise the price of that product</p> <p>9 profitably from a competitive level or not.</p> <p>10 Now, that already guides you into a</p> <p>11 consideration of whether the consumers facing that</p> <p>12 hypothetical monopoly if getting a small but</p> <p>13 significant but sustained -- sustained for a period of</p> <p>14 time increase in price -- would -- would choose not to</p> <p>15 buy that product at all.</p> <p>16 And one of the reasons, maybe the one</p> <p>17 that often comes up most in antitrust analysis, is</p> <p>18 maybe the consumers would -- when they choose not to</p> <p>19 buy a particular product divert their spending to</p> <p>20 another sort of product.</p> <p>21 Consumers can sometimes, when they don't</p> <p>22 buy a product, divert their spending to other things</p> <p>23 entirely, but the question is is there another product</p> <p>24 that's a standout.</p> <p>25 If the answer is no, then we conclude</p>
Page 35	Page 37
<p>1 Q. (BY MR. EWALT) Is it fair to say that as far</p> <p>2 as you -- you know sitting here, you applied the same</p> <p>3 hypothetical monopolist test that's described in the</p> <p>4 merger guidelines?</p> <p>5 A. As far I know.</p> <p>6 Q. Could you please describe the hypothetical</p> <p>7 monopolist test?</p> <p>8 A. Yes, certainly.</p> <p>9 So the hypothetical monopolist test, at</p> <p>10 least as I applied it in this case, I begin with the</p> <p>11 conduct at issue in a particular part of conduct. And</p> <p>12 the firm that is the supply -- the -- the firm that</p> <p>13 engages in that conduct.</p> <p>14 And I considered the product, if that is</p> <p>15 the case, a single product by which the conduct was</p> <p>16 related to.</p> <p>17 And then I ask -- for instance, there</p> <p>18 are multiple competitive variables, but let's focus on</p> <p>19 price. And I ask for the firm that's supplying that</p> <p>20 product what are the constraints on the -- on the --</p> <p>21 on its pricing of that product.</p> <p>22 In particular, I ask are there any</p> <p>23 suppliers of other products that constrain the price</p> <p>24 for which I look first at products that are, for</p> <p>25 instance, functionally in the -- doing the same thing</p>	<p>1 that the firms that have formed the cartel are the</p> <p>2 ones that define the market.</p> <p>3 If the answer is yes, that consumers</p> <p>4 would go to another specific product, we, then, look</p> <p>5 at the suppliers of those other products, expand that</p> <p>6 group of suppliers accordingly, and reconduct the</p> <p>7 hypothetical monopolist test.</p> <p>8 And we keep on doing so until the answer</p> <p>9 is no, at which time we've decided -- we've -- we've</p> <p>10 concluded that this is the market of relevance.</p> <p>11 Q. Thank you very much for that.</p> <p>12 If I heard you correctly, does part of</p> <p>13 the hypothetical monopolist test involve consideration</p> <p>14 of consumer responses to a small but significant</p> <p>15 nontransitory increase in price?</p> <p>16 A. Part of it, yes.</p> <p>17 Q. And that small but significant nontransitory</p> <p>18 increase in price is sometimes called a SSNIP?</p> <p>19 A. Yes.</p> <p>20 Q. And the DOJ and FTC typically use a SSNIP of</p> <p>21 5 percent; is that correct?</p> <p>22 MS. YOUNG: Objection; form.</p> <p>23 A. The authorities around the world tend to</p> <p>24 focus on 5 percent as a -- as a benchmark.</p> <p>25 Q. (BY MR. EWALT) When you applied the</p>

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<p style="text-align: right;">Page 38</p> <p>1 hypothetical monopolist test in this case, did you use 2 a SSNIP of 5 percent?</p> <p>3 A. The ability to use a SSNIP of 5 percent or an 4 exact quantitative number and to -- to be resting the 5 analysis on that benchmark would be something done if 6 you had -- well, basically an almost ideal set of data 7 to understand the price elasticity of demand.</p> <p>8 And, more importantly, the cross price 9 elasticity with respect to other products that was 10 engaged in.</p> <p>11 Without that data, small but significant 12 is -- is a -- a more -- is -- is -- is a less precise 13 increase in price that could include prices that were 14 significantly higher than a 5 percent increase.</p> <p>15 Q. Could a -- could it be significantly lower 16 than a 5 percent price increase?</p> <p>17 A. Yes, certainly.</p> <p>18 Q. In this case, did you apply the hypothetical 19 monopolist test using a SSNIP of less than 5 percent?</p> <p>20 MS. YOUNG: Objection; form.</p> <p>21 A. I didn't actually focus on a benchmark of a 22 quantitative one because of the nature of the evidence 23 available.</p> <p>24 My analysis and application was a 25 consideration of evidence regarding substitutability</p>	<p style="text-align: right;">Page 40</p> <p>1 consumer substitution in response to a SSNIP above the 2 competitive level?</p> <p>3 A. The -- the strictest idealized interpretation 4 of it is that you do that.</p> <p>5 But you do not necessarily have to -- 6 the evidence doesn't necessarily have to identify a 7 competitive pricing level in order to apply the 8 hypothetical monopolist test to whittle down or expand 9 the group of relevant suppliers.</p> <p>10 Q. Is fair to say that ideally the hypothetical 11 monopolist test should begin with prices at the 12 competitive level and then examine consumer 13 substitution in response to a SSNIP?</p> <p>14 MS. YOUNG: Objection; form.</p> <p>15 A. That would be ideal.</p> <p>16 Q. (BY MR. EWALT) Have you ever defined an 17 antitrust market without applying the hypothetical 18 monopolist test?</p> <p>19 A. In other jurisdictions, the courts have been 20 comfortable in just thinking about the, you know, more 21 standard to a traditional expert -- economics -- 22 economics textbook notion of demand and supply 23 substitution as opposed to analyzing that same 24 evidence and interpreting it through the lens of the 25 hypothetical monopolist test.</p>
<p style="text-align: right;">Page 39</p> <p>1 that did not allow a actual calculation of a price 2 elasticity of demand.</p> <p>3 Q. (BY MR. EWALT) So would you agree that it's 4 possible to apply the hypothetical monopolist test 5 without a specific quantitative level ascribed to the 6 small but significant nontransitory increase in price?</p> <p>7 MS. YOUNG: Objection; form.</p> <p>8 A. Yes.</p> <p>9 MS. YOUNG: You may answer.</p> <p>10 A. Yes, I do.</p> <p>11 Q. (BY MR. EWALT) Does the hypothetical 12 monopolist test examine consumer substitution?</p> <p>13 A. It does.</p> <p>14 Q. Is consumer substitution the critical 15 question at the heart of market definition?</p> <p>16 MS. YOUNG: Objection; form.</p> <p>17 A. Depending on the context, I -- the way I've 18 described it in the past outside of this case is we're 19 looking at demand side substitution and sometimes 20 supply side substitution.</p> <p>21 Q. (BY MR. EWALT) Did you look at supply side 22 substitution in this case?</p> <p>23 A. In this case, it was focused on demand side.</p> <p>24 Q. Should the hypothetical monopolist test begin 25 with prices at the competitive level and then examine</p>	<p style="text-align: right;">Page 41</p> <p>1 Q. In a matter pending in a U.S. Court, have you 2 ever defined an antitrust market without applying the 3 hypothetical monopolist test?</p> <p>4 A. In recent memory, I -- I don't think I -- I 5 have applied it.</p> <p>6 Q. Is it possible to apply the hypothetical 7 monopolist test in a quantitative way in this case?</p> <p>8 MS. YOUNG: Objection; form.</p> <p>9 A. In the full being able to provide a confident 10 estimate of the price elasticity of demand at any 11 price, that alone something that would be close to the 12 competitive price, there was insufficient data in this 13 case.</p> <p>14 Q. (BY MR. EWALT) So did you perform a 15 quantitative hypothetical monopolist test in this 16 case?</p> <p>17 A. I reviewed quantitative evidence to assist me 18 in doing so, but of the nature of actually being able 19 to calculate a robust price elasticity of demand in 20 each of the relevant markets that I considered, I was 21 not able to do that.</p> <p>22 Q. When you applied the hypothetical monopolist 23 test in this case, were you examining whether enough 24 consumers would react to a SSNIP so as to make the 25 price increase unprofitable for a hypothetical</p>

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<p style="text-align: right;">Page 42</p> <p>1 monopolist?</p> <p>2 MS. YOUNG: Objection; form.</p> <p>3 A. I was analyzing whether the volume of sales</p> <p>4 would substitute a way in sufficient amount to render</p> <p>5 a increase in price unprofitable.</p> <p>6 Q. (BY MR. EWALT) And when you talk about there</p> <p>7 being a sufficient amount to render an increase in</p> <p>8 price unprofitable, is that sometimes called marginal</p> <p>9 substitution?</p> <p>10 MS. YOUNG: Objection; form.</p> <p>11 A. I guess it could sometimes be called that,</p> <p>12 yes.</p> <p>13 Q. (BY MR. EWALT) And does marginal substitution</p> <p>14 differ from full substitution?</p> <p>15 A. What I would describe full substitution as is</p> <p>16 when you've got an increase in price such that no one</p> <p>17 consumes the product anymore whereas I guess marginal</p> <p>18 substitution is where I've got an increase in -- in</p> <p>19 price and there's an increment of a substitution</p> <p>20 which, I think we can use interchangeably. How's</p> <p>21 that?</p> <p>22 Q. All right. Let me just make sure I got this</p> <p>23 right.</p> <p>24 So --</p> <p>25 A. Let me just clarify.</p>	<p style="text-align: right;">Page 44</p> <p>1 A. Full substitution in this case would be a</p> <p>2 subset of incremental substitution. In other words,</p> <p>3 if you -- if it was the case that a SSNIP led to</p> <p>4 nobody buying a product, that automatically tells you</p> <p>5 especially if they were -- nobody was buying a product</p> <p>6 by switching to another identifiable sets of products</p> <p>7 would automatically tell you that you've drawn them --</p> <p>8 the definition of the market too narrowly.</p> <p>9 Q. Is it possible that a candidate relevant</p> <p>10 market would pass the hypothetical monopolist test if</p> <p>11 only a full substitution analysis were performed but</p> <p>12 failed the hypothetical monopolist test if an</p> <p>13 incremental substitution analysis were performed?</p> <p>14 MS. YOUNG: Objection; form.</p> <p>15 A. No, as one is a substitute of the other.</p> <p>16 Q. (BY MR. EWALT) So I'm going to ask you about</p> <p>17 that idea a little bit more.</p> <p>18 As I understand it, if you have a full</p> <p>19 substitution analysis, you're asking if all customers</p> <p>20 would stop using the product in response to a SSNIP,</p> <p>21 right?</p> <p>22 MS. YOUNG: Objection; form.</p> <p>23 A. I guess you could do that.</p> <p>24 I -- I'm -- the only thing I'm</p> <p>25 struggling to is that I don't think of substitution in</p>
<p style="text-align: right;">Page 43</p> <p>1 The -- the term "marginal" sometimes to</p> <p>2 an economist means marginal -- you know, the quantum</p> <p>3 of a derivative in calculus where sometimes it's more</p> <p>4 useful term for what is being done is incremental.</p> <p>5 Q. Okay. All right. Just so -- just to make</p> <p>6 sure we've got the terminology down here, would an</p> <p>7 examination of full substitution focus on whether</p> <p>8 customers will stop using the relevant product</p> <p>9 entirely if faced with a SSNIP?</p> <p>10 A. Yes.</p> <p>11 Q. And would an examination of incremental</p> <p>12 substitution or marginal substitution focus on whether</p> <p>13 enough customers will reduce usage of the relevant</p> <p>14 product if faced with a SSNIP?</p> <p>15 MS. YOUNG: Objection; form.</p> <p>16 A. Enough customers using -- reducing their</p> <p>17 consumption by enough.</p> <p>18 Q. (BY MR. EWALT) Okay. Fair.</p> <p>19 Should the hypothetical monopolist test</p> <p>20 examine whether marginal substitution or incremental</p> <p>21 substitution is sufficient to defeat a SSNIP?</p> <p>22 A. That is one way you could apply it.</p> <p>23 Q. Is it appropriate for the hypothetical</p> <p>24 monopolist test to examine whether full substitution</p> <p>25 is sufficient to defeat a SSNIP?</p>	<p style="text-align: right;">Page 45</p> <p>1 full substitution terms, usually.</p> <p>2 That would be a -- that would be sort of</p> <p>3 a -- a thing that we sometimes describe to our</p> <p>4 students as -- as possible but not something that</p> <p>5 comes up in reality.</p> <p>6 Q. (BY MR. EWALT) And you would agree that the</p> <p>7 purpose of the hypothetical monopolist test is to</p> <p>8 investigate incremental substitution?</p> <p>9 A. It is to investigate the -- the magnitude of</p> <p>10 that incremental substitution, the -- the -- well, the</p> <p>11 size of it.</p> <p>12 Q. Well, the purpose is -- of the hypothetical</p> <p>13 monopolist test is to investigate whether there would</p> <p>14 be enough incremental substitution for it to be</p> <p>15 unprofitable for a hypothetical monopolist to raise</p> <p>16 prices by a SSNIP?</p> <p>17 A. That's right.</p> <p>18 Q. And would you agree that evidence of full</p> <p>19 substitution would not be sufficient to reach a</p> <p>20 conclusion about the definition of a relevant market?</p> <p>21 MS. YOUNG: Objection; form.</p> <p>22 Sorry. Go ahead.</p> <p>23 A. If you found that full substitution would</p> <p>24 occur, then that is not sufficient because it would</p> <p>25 trigger you expanding the set of suppliers or products</p>



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<p style="text-align: right;">Page 46</p> <p>1 under consideration before you ended up with your 2 market definition. 3 Q. (BY MR. EWALT) If you found that full 4 substitution would not occur, would that be sufficient 5 to reach a conclusion about the definition of a 6 relevant market? 7 A. No. 8 Q. If you found that full substitution would 9 occur, would that be sufficient to reach a conclusion 10 about the definition of a relevant market? 11 A. No. 12 Q. Could you please turn to Paragraph 124 of 13 your rebuttal report, Exhibit 2. 14 A. Sorry. Could you say that -- 15 Q. Paragraph 124. 16 And the first sentence of that paragraph 17 reads: "Moreover, because the ad server fee is above 18 competitive levels at present..." 19 And then it continues. 20 Do you see that? 21 A. Yes. 22 Q. Which ad server fee are you referring to? 23 A. I don't recall what those -- paragraph 24 before. 25 I think that might have more</p>	<p style="text-align: right;">Page 48</p> <p>1 of your testimony with counsel? 2 MS. YOUNG: I'm going to object to that 3 question as to getting to the contents of 4 communication with counsel. 5 You can ask him if he had discussions 6 with counsel but cannot ask him the contents of those 7 communications, per the expert stipulation in this 8 case. 9 MR. EWALT: Let's go off the record. 10 THE VIDEOGRAPHER: Now going off the 11 record. The time is approximately 10:19. 12 (Break from 10:19 a.m. to 10:20 a.m.) 13 THE VIDEOGRAPHER: Back on the record. 14 The time is 10:20. 15 Q. (BY MR. EWALT) Professor Gans, during the 16 break, prior to the one-minute break we just took, did 17 you have discussions about this case with counsel? 18 MS. YOUNG: I'm going to object again as 19 to going to the contents of communications with 20 counsel when you asked about -- about this case. 21 MR. EWALT: Are you instructing him not 22 to answer? 23 MS. YOUNG: I am instructing him not to 24 answer as to the contents of communication with 25 counsel.</p>
<p style="text-align: right;">Page 47</p> <p>1 accurately -- by at -- the ad server fee -- the ad 2 server fee the people are -- the customers are paying, 3 which, of course, are the fees that I used to 4 calculate in the previous paragraph. I used the 5 plural "fees" there. 6 MS. YOUNG: Counsel, we've been going 7 for over an hour. So I just want to flag that for you 8 if you reach a good breaking point. 9 MR. EWALT: Okay. Would you like a 10 break? 11 THE WITNESS: I'm -- I'm happy to have a 12 break at the -- 13 MS. YOUNG: Yeah. We can do a break 14 every hour. 15 MR. EWALT: Let's go off -- let's go off 16 the record. 17 THE WITNESS: Okay. 18 THE VIDEOGRAPHER: It's now the end of 19 Video 1 of Joshua Gans. Off the record. The time is 20 approximately 10:04. 21 (Break from 10:04 a.m. to 10:18 a.m.) 22 THE VIDEOGRAPHER: We're now back on the 23 record. Video 2 of Joshua Gans. The time is 10:18. 24 Q. (BY MR. EWALT) Welcome back, Professor Gans. 25 During the break did you discuss the substance</p>	<p style="text-align: right;">Page 49</p> <p>1 Q. (BY MR. EWALT) All right. Let's go back to 2 Paragraph 124 of your rebuttal report. 3 And we were looking at the statement regarding 4 ad server fees above competitive levels. 5 A. Yes. 6 Q. And you said that you intended that to mean 7 ad server fees, plural. 8 Do I have that right? 9 MS. YOUNG: Objection; form. 10 You may go ahead. 11 A. I'm -- I'm -- I think either could be 12 interpreted depending on how you thought about those 13 fees. 14 Q. (BY MR. EWALT) Do your expert reports 15 disclose any basis for your opinion that DFP's ad 16 server fees are presently above competitive levels? 17 A. As I showed in my opening report, the market 18 for ad servers in open web display advertising is not 19 a competitive market. So that is the basis for which 20 I claim that ad server fees are not at the competitive 21 levels. 22 Q. And you've concluded that ad servers are not 23 a competitive market based on your market definition 24 for ad servers; is that correct? 25 MS. YOUNG: Objection; form.</p>

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<p style="text-align: right;">Page 50</p> <p>1 A. Well, within that market definition, I've</p> <p>2 concluded that is not a competitive market.</p> <p>3 Q. (BY MR. EWALT) Right. So if you don't know</p> <p>4 what the -- let me back up.</p> <p>5 How can you tell whether a price is at</p> <p>6 competitive levels?</p> <p>7 A. When you have a market that you've concluded</p> <p>8 is not a competitive market and that market is served</p> <p>9 by firms that are maximizing profits of some</p> <p>10 description in the setting of their prices, you can</p> <p>11 conclude that the prices are not at the competitive</p> <p>12 level. Infer from that.</p> <p>13 Q. Can you conclude whether prices are at</p> <p>14 competitive levels independently of the market</p> <p>15 definition?</p> <p>16 MS. YOUNG: Objection; form.</p> <p>17 A. There are other ways, if you had sufficient</p> <p>18 data to be able to do that.</p> <p>19 Q. (BY MR. EWALT) In this case, did you make any</p> <p>20 attempt to estimate whether ad server fees were at the</p> <p>21 competitive level independently of the market</p> <p>22 definition?</p> <p>23 MS. YOUNG: Objection; form.</p> <p>24 A. I considered alternative ways of gathering</p> <p>25 evidence regarding the competitiveness of the market.</p>	<p style="text-align: right;">Page 52</p> <p>1 definition, did you reach any conclusion as to whether</p> <p>2 Google's ad exchange fees are presently below, at, or</p> <p>3 above the competitive level?</p> <p>4 MS. YOUNG: Objection; form.</p> <p>5 A. Because my process involved first defining</p> <p>6 the markets and then assessing the degree of market</p> <p>7 power by Google -- of Google in those markets, I guess</p> <p>8 it was dependent on that.</p> <p>9 Q. (BY MR. EWALT) Independently of the market</p> <p>10 definition, did you reach any conclusion as to whether</p> <p>11 Google's ad exchange fees are presently below, at, or</p> <p>12 above the competitive level?</p> <p>13 MS. YOUNG: Objection; form.</p> <p>14 A. I did not.</p> <p>15 Q. (BY MR. EWALT) Independently of the market</p> <p>16 definition, did you reach any conclusion as to whether</p> <p>17 Google's fees for small advertising buying tools are</p> <p>18 presently below, at, or above the competitive level?</p> <p>19 MS. YOUNG: Objection; form.</p> <p>20 A. This is similar to the other question, so I</p> <p>21 did not.</p> <p>22 Q. (BY MR. EWALT) So apologies, I've got to ask</p> <p>23 these again for a broader period of time.</p> <p>24 So let me just ask it again. Okay?</p> <p>25 Independently of the market definition, did</p>
<p style="text-align: right;">Page 51</p> <p>1 And for that particular one, concluded</p> <p>2 there was insufficient cost side information given</p> <p>3 by -- available from Google to -- to make that</p> <p>4 determination.</p> <p>5 Q. (BY MR. EWALT) Independently of the market</p> <p>6 definition, did you reach any conclusion as to whether</p> <p>7 Google's ad server fees are presently below, at, or</p> <p>8 above the competitive level?</p> <p>9 MS. YOUNG: Objection; form.</p> <p>10 A. The context for the statement in the</p> <p>11 paragraph that we're considering was a rebuttal of</p> <p>12 particular claims regarding substitution that</p> <p>13 Professor Baye made. And that's the context in which</p> <p>14 I wrote --</p> <p>15 Q. (BY MR. EWALT) That's fair. I understand the</p> <p>16 context. I'm just trying to get an answer to the</p> <p>17 question, though.</p> <p>18 A. Oh, okay.</p> <p>19 Q. Which was, independently of the market</p> <p>20 definition, did you reach any conclusion as to whether</p> <p>21 Google's ad server fees are presently below, at, or</p> <p>22 above the competitive level?</p> <p>23 MS. YOUNG: Objection; form.</p> <p>24 A. I did not.</p> <p>25 Q. (BY MR. EWALT) Independently of the market</p>	<p style="text-align: right;">Page 53</p> <p>1 you reach any conclusion as to whether Google's fees</p> <p>2 for publisher ad servers have at any time been below,</p> <p>3 at, or above the competitive level?</p> <p>4 MS. YOUNG: Objection; form.</p> <p>5 A. I did not.</p> <p>6 Q. (BY MR. EWALT) Independently of the market</p> <p>7 definition, did you reach any conclusions as to</p> <p>8 whether Google's ad exchange fees have at any time</p> <p>9 been below, at, or above the competitive level?</p> <p>10 MS. YOUNG: Objection; form.</p> <p>11 A. I did not reach a conclusion regarding</p> <p>12 Google's ad exchange fees.</p> <p>13 Q. (BY MR. EWALT) Independently of the market</p> <p>14 definition, did you reach any conclusions as to</p> <p>15 whether Google's fees for small advertiser buying</p> <p>16 tools have at any time been below, at, or above the</p> <p>17 competitive level?</p> <p>18 MS. YOUNG: Objection; form.</p> <p>19 A. As with my previous answers in this thread, I</p> <p>20 did not.</p> <p>21 Q. (BY MR. EWALT) Please turn to Paragraph 158</p> <p>22 in your opening report.</p> <p>23 A. Okay.</p> <p>24 (Discussion off the record.)</p> <p>25 A. 158?</p>

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<p>1 Q. (BY MR. EWALT) Yes, sir.</p> <p>2 A. Okay.</p> <p>3 Q. Does Paragraph 158 describe how you applied</p> <p>4 the hypothetical monopolist test in defining a</p> <p>5 publisher ad server market?</p> <p>6 MS. YOUNG: Objection; form.</p> <p>7 A. Let me briefly --</p> <p>8 Q. (BY MR. EWALT) Sure.</p> <p>9 A. -- read this.</p> <p>10 Yes.</p> <p>11 Q. Okay. In the last sentence of Paragraph 158,</p> <p>12 you wrote: "It is highly unlikely a 5 percent price</p> <p>13 increase in the market for publisher ad server used</p> <p>14 for the sale of open web display advertising would</p> <p>15 cause the publishing giant to eliminate digital</p> <p>16 advertising from its content."</p> <p>17 Do you see that?</p> <p>18 A. I see that statement.</p> <p>19 Q. Is it fair to say that in Paragraph 158, you</p> <p>20 examined whether a SSNIP for publisher ad servers</p> <p>21 would lead The New York Times to completely stop</p> <p>22 selling digital advertising and rely instead on</p> <p>23 subscriptions as its sole source of revenue?</p> <p>24 MS. YOUNG: Objection; form.</p> <p>25 A. Can you repeat that question again?</p>	<p>1 A. Yes. Paragraph 160.</p> <p>2 Q. Okay. Where in Paragraph 160 do you discuss</p> <p>3 incremental substitution?</p> <p>4 A. Well, I discussed incremental substitution</p> <p>5 that would be facilitated by building in-house ad</p> <p>6 serving capabilities, the plain reading of which is</p> <p>7 that the publishers would then use some of their ad</p> <p>8 serving through those in-house capabilities.</p> <p>9 Q. Where do you describe substitution between</p> <p>10 in-house ad servers and third-party ad servers?</p> <p>11 A. In -- in-house and third-party ad servers?</p> <p>12 Q. Not in-house ad servers. That's what I mean</p> <p>13 by third-party ad servers.</p> <p>14 A. Oh, I see, I see.</p> <p>15 Q. So let me ask it again.</p> <p>16 Where in Paragraph 160 do you discuss</p> <p>17 incremental substitution between ad servers and</p> <p>18 in-house ad servers?</p> <p>19 A. I don't in that paragraph.</p> <p>20 Q. Okay. Do you discuss incremental</p> <p>21 substitution in Paragraph 159?</p> <p>22 A. Yes.</p> <p>23 Q. Where?</p> <p>24 A. Throughout.</p> <p>25 Q. Could you point to the specific language in</p>
Page 55	Page 57
<p>1 Q. (BY MR. EWALT) Is it fair to say that in</p> <p>2 Paragraph 158 you examined whether a SSNIP for</p> <p>3 publisher ad servers would lead The New York Times to</p> <p>4 completely stop selling digital advertising and rely</p> <p>5 instead on subscriptions as its sole source of</p> <p>6 revenue?</p> <p>7 MS. YOUNG: Same objection.</p> <p>8 A. That -- that paragraph discusses, you know,</p> <p>9 one possibility that could arise from that.</p> <p>10 Q. (BY MR. EWALT) Does Paragraph 158 analyze</p> <p>11 incremental or marginal substitution?</p> <p>12 A. That paragraph provides a -- information on</p> <p>13 the significance of advertising to The New York Times</p> <p>14 and suggest that it would not forego that entirety of</p> <p>15 that.</p> <p>16 Q. So you would agree that Paragraph 158 does</p> <p>17 not analyze incremental substitution, correct?</p> <p>18 MS. YOUNG: Objection; form.</p> <p>19 A. In and of itself doesn't, but if in terms of</p> <p>20 the consideration of the hypothetical monopolist test</p> <p>21 in the entire subsection, incremental substitution is</p> <p>22 considered.</p> <p>23 Q. (BY MR. EWALT) Can you point to other parts</p> <p>24 of that subsection where incremental substitution is</p> <p>25 considered.</p>	<p>1 Paragraph 159 where you discuss incremental</p> <p>2 substitution?</p> <p>3 A. With statements such as "lose significant</p> <p>4 revenue" or "a large proportion of user base."</p> <p>5 Q. Do you connect that incremental substitution</p> <p>6 to the profitability for the hypothetical monopolist</p> <p>7 test?</p> <p>8 MS. YOUNG: Objection; form.</p> <p>9 Q. (BY MR. EWALT) Let me rephrase.</p> <p>10 You just pointed to some language in</p> <p>11 Paragraph 159 that you've characterized as relating to</p> <p>12 incremental substitution.</p> <p>13 My question is: Does that language connect or</p> <p>14 describe the impact on the profitability of the</p> <p>15 hypothetical monopolist of that incremental</p> <p>16 substitution?</p> <p>17 MS. YOUNG: Objection; form.</p> <p>18 A. I'm sorry. I'll have to ask you to repeat</p> <p>19 the question.</p> <p>20 Q. (BY MR. EWALT) Does Paragraph 159 of your</p> <p>21 opening report describe the impact on the</p> <p>22 profitability of the hypothetical monopolist from</p> <p>23 incremental substitution?</p> <p>24 MS. YOUNG: Same objection.</p> <p>25 A. It -- it describes the components of that</p>

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<p style="text-align: right;">Page 58</p> <p>1 profitability.</p> <p>2 Q. (BY MR. EWALT) Where does it describe</p> <p>3 profitability in Paragraph 159?</p> <p>4 A. I said it described the components of it,</p> <p>5 the -- which is the amount of sales that would be lost</p> <p>6 should publishers be considering changing their</p> <p>7 business model to a subscription model.</p> <p>8 Q. Do you reach any conclusion as to whether it</p> <p>9 would be profitable for publishers to change their</p> <p>10 business model to a subscription model?</p> <p>11 A. I do.</p> <p>12 Q. Where?</p> <p>13 A. In the components that would be significantly</p> <p>14 costly and so.</p> <p>15 Q. So you don't use the word "profit"?</p> <p>16 A. I don't use the word "profit." I said I</p> <p>17 looked at the components of profit.</p> <p>18 MS. YOUNG: And let him finish his</p> <p>19 question before you answer. You talked over each</p> <p>20 other a little there.</p> <p>21 Q. (BY MR. EWALT) All right, sir, let's talk</p> <p>22 about ad exchanges.</p> <p>23 Is the key function of an ad exchange to match</p> <p>24 buyers and sellers of display advertising?</p> <p>25 MS. YOUNG: Objection; form.</p>	<p style="text-align: right;">Page 60</p> <p>1 market for ad exchanges?</p> <p>2 A. Yes.</p> <p>3 Q. Are ad exchanges two-sided transaction</p> <p>4 platforms?</p> <p>5 A. That is a word that you could use for them.</p> <p>6 Q. When you define a market for ad exchanges,</p> <p>7 did you focus on how publishers would respond to a</p> <p>8 SSNIP?</p> <p>9 MS. YOUNG: Objection; form.</p> <p>10 A. I -- I focused on should the amount that the</p> <p>11 ad exchange is charging publishes in terms of taking</p> <p>12 revenue from advertisers if that increased what the</p> <p>13 publisher's substitution options would be.</p> <p>14 Q. (BY MR. EWALT) When you defined a market for</p> <p>15 ad exchanges, did you consider advertisers' options in</p> <p>16 response to a SSNIP?</p> <p>17 MS. YOUNG: Objection; form.</p> <p>18 A. For advertisers, the consideration would</p> <p>19 be -- would require substitution, would be things that</p> <p>20 were -- were -- were part of the terms of trade that</p> <p>21 were not necessarily the take rate of the ad exchange.</p> <p>22 Q. (BY MR. EWALT) So did you not consider</p> <p>23 advertiser responses to a SSNIP when you were defining</p> <p>24 a market for ad exchanges?</p> <p>25 A. Well --</p>
<p style="text-align: right;">Page 59</p> <p>1 A. It is to do so using information and bids.</p> <p>2 Q. (BY MR. EWALT) So you agree then that a key</p> <p>3 function of an ad exchange is to match buyers and</p> <p>4 sellers of display advertising?</p> <p>5 MS. YOUNG: Same objection.</p> <p>6 A. It is to find opportunities for matches and</p> <p>7 to communicate those to the parties.</p> <p>8 Q. (BY MR. EWALT) For each transaction on an ad</p> <p>9 exchange, is there always exactly one buyer and one</p> <p>10 seller?</p> <p>11 MS. YOUNG: Objection to form.</p> <p>12 A. If a transaction is completed? You mean if a</p> <p>13 match is found?</p> <p>14 Q. (BY MR. EWALT) (Nodding head.)</p> <p>15 A. From the point of view of the ad exchange,</p> <p>16 yes.</p> <p>17 Q. For each transaction on an ad exchange, do</p> <p>18 the buyer and seller interact simultaneously?</p> <p>19 MS. YOUNG: Objection; form.</p> <p>20 A. The buyer and seller submit information to</p> <p>21 the ad exchange. And the ad exchange considers that</p> <p>22 information together which from an economist point of</p> <p>23 view would be simultaneous.</p> <p>24 Q. (BY MR. EWALT) Are there indirect network</p> <p>25 effects between publishers and advertisers in the</p>	<p style="text-align: right;">Page 61</p> <p>1 MS. YOUNG: Objection; form.</p> <p>2 You may answer.</p> <p>3 A. Well, in this particular case, the</p> <p>4 substitution triggers for advertisers would be perhaps</p> <p>5 what you would regard -- what we would regard as</p> <p>6 nonprice.</p> <p>7 Q. (BY MR. EWALT) Okay. I'm just asking what</p> <p>8 you did.</p> <p>9 A. Yeah.</p> <p>10 Q. Did you consider advertiser responses to a</p> <p>11 SSNIP when you were defining a market for ad</p> <p>12 exchanges?</p> <p>13 MS. YOUNG: Same objection.</p> <p>14 A. I can't recall whether I looked at that</p> <p>15 particularly given the way that I -- it's in my mind</p> <p>16 now, but we could have a look at the report to see.</p> <p>17 Q. (BY MR. EWALT) Well, how do you -- let's</p> <p>18 not -- let's step back and say -- let me -- let me go</p> <p>19 back for one second.</p> <p>20 You said that you could define ad exchanges --</p> <p>21 you could consider ad exchanges to be a two-sided</p> <p>22 transaction platform, right?</p> <p>23 A. Yes.</p> <p>24 Q. Do you consider ad exchanges to be a</p> <p>25 two-sided transaction platform?</p>

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<p>1 MS. YOUNG: Objection; form.</p> <p>2 A. The ad exchange itself is performing the</p> <p>3 function of matching given the information from</p> <p>4 advertisers and publishers.</p> <p>5 Q. (BY MR. EWALT) Okay. So, yes or no, do you</p> <p>6 consider ad exchanges to be two-sided transaction</p> <p>7 platforms?</p> <p>8 MS. YOUNG: Objection; form.</p> <p>9 Go ahead.</p> <p>10 A. The -- my reason for hesitation in sort of</p> <p>11 doing that word -- well, let me -- let me put it this</p> <p>12 way, and maybe this will be easier on us.</p> <p>13 Can you define what you mean by</p> <p>14 "two-sided transaction platform"?</p> <p>15 Q. (BY MR. EWALT) So we've been talking about</p> <p>16 it. I understand it's a term of art in economics.</p> <p>17 A. It is?</p> <p>18 Q. It's -- do you disagree? Do you think it --</p> <p>19 a two-sided transaction platform is not an economic</p> <p>20 term?</p> <p>21 A. I think "two-sided platform" is or --</p> <p>22 "multi-sided platform" is a term of art in economics.</p> <p>23 I think "multi-sided matching" is a term</p> <p>24 of art in -- in economics.</p> <p>25 I am concerned when you insert the word</p>	<p>1 considered advertiser responses to a SSNIP when you</p> <p>2 were defining a market for ad exchanges.</p> <p>3 A. Okay.</p> <p>4 Okay.</p> <p>5 Q. Did you consider advertiser responses to a</p> <p>6 SSNIP when you defined a market for ad exchanges?</p> <p>7 MS. YOUNG: Objection; form.</p> <p>8 A. I did not find it necessary to do so because</p> <p>9 the application of the hypothetical monopolist test in</p> <p>10 the procedure that I outlined earlier in our</p> <p>11 discussion stopped prior to having to do that.</p> <p>12 Q. (BY MR. EWALT) When you defined a market for</p> <p>13 ad exchanges, did you consider only the responses of</p> <p>14 publishers to a SSNIP?</p> <p>15 MS. YOUNG: Objection; form.</p> <p>16 A. When I was considering the set of suppliers</p> <p>17 of products, it turned out that the publishers were</p> <p>18 the ones who had the least substitution possibilities.</p> <p>19 So that side of the market bound in</p> <p>20 applying the hypothetical monopolist test, meaning</p> <p>21 that is all I had to consider to be satisfied with the</p> <p>22 market's boundaries.</p> <p>23 Q. (BY MR. EWALT) Would you please turn to</p> <p>24 Paragraph 149 of your rebuttal report.</p> <p>25 That paragraph reads: "In connection with my</p>
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<p>1 "transaction" into it you are meaning something</p> <p>2 different --</p> <p>3 Q. Okay.</p> <p>4 A. -- than those.</p> <p>5 Q. That's fair.</p> <p>6 Are ad exchange -- strike that.</p> <p>7 Do you consider ad exchanges to be</p> <p>8 two-sided platforms?</p> <p>9 MS. YOUNG: Objection; form.</p> <p>10 A. I do.</p> <p>11 Q. (BY MR. EWALT) Do you consider ad exchanges</p> <p>12 to be two-sided platforms that match publishers and</p> <p>13 advertisers?</p> <p>14 MS. YOUNG: Objection; form.</p> <p>15 A. That match publishers and advertisers based</p> <p>16 on the information submitted to the platform.</p> <p>17 Q. (BY MR. EWALT) Do you consider ad exchanges</p> <p>18 to be two-sided platforms that match publishers and</p> <p>19 advertisers based on information submitted to the</p> <p>20 platform?</p> <p>21 MS. YOUNG: Objection; form.</p> <p>22 A. Yes.</p> <p>23 Q. (BY MR. EWALT) Okay. So why don't we just</p> <p>24 take a moment here and you can review your report --</p> <p>25 both reports and refresh your memory as to whether you</p>	<p>1 HMT for ad exchanges, in Paragraph 103 I describe an</p> <p>2 HMT test conducted by Google referenced by Professor</p> <p>3 Milgrom."</p> <p>4 Do you see that?</p> <p>5 A. Yes.</p> <p>6 Q. Would you please turn to Paragraph 103 of</p> <p>7 your rebuttal report and just take a moment to review</p> <p>8 Paragraphs 103 and 104.</p> <p>9 Let me know when you're ready.</p> <p>10 A. Yes.</p> <p>11 Q. Do you think that in Paragraph 149 of your</p> <p>12 rebuttal report you meant to refer to Paragraph 104</p> <p>13 rather than Paragraph 103?</p> <p>14 A. Oh, in paragraph -- oh, I'm sorry. I -- I</p> <p>15 stopped at 104. Just a second.</p> <p>16 Q. Sure. Sure.</p> <p>17 So we started with Paragraph 149.</p> <p>18 A. Yes.</p> <p>19 Q. And my question to you is: Do you --</p> <p>20 A. Oh.</p> <p>21 Q. -- do you think that in Paragraph 149 of your</p> <p>22 rebuttal report you meant to refer to Paragraph 104</p> <p>23 rather than Paragraph 103?</p> <p>24 A. I do.</p> <p>25 Q. All right. I'm handing you a document that's</p>

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1 been marked as Exhibit 4.  
2 (Marked Gans Exhibit No. 4.)  
3 Q. (BY MR. EWALT) The first page bears Bates No.  
4 GOOG-AT-MDL-B-001391461. It's an e-mail dated  
5 September 2, 2015.  
6 Do you see that?  
7 A. Yes.  
8 Q. Is Exhibit 4 the document you discuss in  
9 Paragraph 104 of your rebuttal report?  
10 A. Yes.  
11 Q. Do you interpret Exhibit 4 as a hypothetical  
12 monopolist test conducted by Google?  
13 MS. YOUNG: Objection; form.  
14 A. Exhibit 4 was a test, an analysis provided by  
15 Google, but I don't believe that they were conducting  
16 a hypothetical monopolist test.  
17 Q. (BY MR. EWALT) Do you interpret Exhibit 4 as  
18 evidence in forming your application of a hypothetical  
19 monopolist test?  
20 A. I think it is informing any economist  
21 application of the hypothetical monopolist test.  
22 [REDACTED]  
23 [REDACTED]  
24 [REDACTED]  
25 Q. And if you look at the page with Bates number

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1 ending in 462, do you see a set of bullets near the  
2 top of the page?  
3 A. Yes.  
4 [REDACTED]  
5 [REDACTED]  
6 [REDACTED]  
7 [REDACTED]  
8 [REDACTED]  
9 [REDACTED]  
10 [REDACTED]  
11 [REDACTED]  
12 [REDACTED]  
13 [REDACTED]  
14 [REDACTED]  
15 [REDACTED]  
16 [REDACTED]  
17 [REDACTED]  
18 [REDACTED]  
19 [REDACTED]  
20 [REDACTED]  
21 [REDACTED]  
22 [REDACTED]  
23 [REDACTED]  
24 [REDACTED]  
25 [REDACTED]

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1 Q. (BY MR. EWALT) Does that imply that if Google  
2 increased its price its profit would go down?  
3 MS. YOUNG: Objection; form.  
4 A. So no.  
5 Q. (BY MR. EWALT) Why not?  
6 A. This calculation was based on DRS Version 1.  
7 And what that did is it maintained  
8 Google's take rate on impressions that it predicted  
9 would be matched at that take rate and reduced the  
10 take rate on impressions that it believed would not be  
11 matched on AdX, or AdX, at that -- at that take rate,  
12 at the -- at its normal take rate.  
13 And so the profit changes are wholly on  
14 the increment, which was the additional transactions  
15 that were matched as a result of Google's discount.  
16 Q. So you interpret the third bullet point on  
17 Page 462 of Exhibit 4 to refer to the profit from only  
18 the incremental transactions that occurred because of  
19 DRS Version 1?  
20 A. That is what I interpreted -- that's what it  
21 is.  
22 [REDACTED]  
23 [REDACTED]  
24 [REDACTED]  
25 [REDACTED]

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1 [REDACTED]  
2 [REDACTED]  
3 [REDACTED]  
4 [REDACTED]  
5 [REDACTED]  
6 [REDACTED]  
7 [REDACTED]  
8 [REDACTED]  
9 [REDACTED]  
10 [REDACTED]  
11 [REDACTED]  
12 [REDACTED]  
13 Q. Okay. Do some publishers have both web and  
14 in-app advertising inventory?  
15 You can put that aside.  
16 A. Are we done with this? Okay.  
17 MS. YOUNG: Objection; form.  
18 Q. (BY MR. EWALT) Let me -- let me ask the  
19 question again.  
20 MR. EWALT: And you can object again.  
21 MS. YOUNG: Yeah.  
22 Q. (BY MR. EWALT) Do some publishers have both  
23 web and in-app advertising inventory?  
24 MS. YOUNG: Same objection.  
25 A. Yes.

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1 Q. (BY MR. EWALT) Can a publisher use the same  
2 ad exchange to transact both web and in-app inventory?  
3 A. They could use the same provider.  
4 Q. Did you investigate whether in response to a  
5 SSNIP for web impressions publishers would be able to  
6 shift enough users from websites to apps to make it  
7 unprofitable for a hypothetical monopolist of ad  
8 exchanges to raise prices on web impressions?  
9 MS. YOUNG: Objection; form.  
10 A. To -- your question is with respect to an  
11 increase in ad exchange prices for open web display  
12 ads, the take rate on that.  
13 Would publishers use some means to -- to  
14 move customers to their app advertising to -- or set  
15 up an app?  
16 Q. (BY MR. EWALT) And the question is: Did you  
17 investigate that?  
18 A. I did that consider that, yes.  
19 Q. Did you express an opinion in either of your  
20 reports about whether, in response to a SSNIP for web  
21 impressions, publishers would be able to shift enough  
22 users from websites to apps to make it unprofitable  
23 for a hypothetical monopolist of ad exchanges to raise  
24 prices for web impressions?  
25 MS. YOUNG: Objection; form.

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1 A. I don't recall whether I did.  
2 Q. (BY MR. EWALT) Would you please turn to  
3 Page 221 of your rebuttal report.  
4 MS. YOUNG: Paragraph or page?  
5 MR. EWALT: Page 221.  
6 A. Did you say paragraph?  
7 Q. (BY MR. EWALT) Page. Sorry.  
8 A. Oh, sorry.  
9 [REDACTED]  
10 [REDACTED]  
11 [REDACTED]  
12 [REDACTED]  
13 [REDACTED]  
14 [REDACTED]  
15 [REDACTED]  
16 [REDACTED]  
17 [REDACTED]  
18 [REDACTED]  
19 [REDACTED]  
20 [REDACTED]  
21 [REDACTED]  
22 [REDACTED]  
23 [REDACTED]  
24 [REDACTED]  
25 [REDACTED]

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1 [REDACTED]  
2 [REDACTED]  
3 [REDACTED]  
4 [REDACTED]  
5 [REDACTED]  
6 [REDACTED]  
7 [REDACTED]  
8 [REDACTED]  
9 [REDACTED]  
10 [REDACTED]  
11 [REDACTED]  
12 [REDACTED]  
13 Q. Did you investigate -- strike that.  
14 In your reports do you express an  
15 opinion whether, in response to a SSNIP, publishers  
16 would switch to selling enough of their inventory  
17 directly without using an ad exchange to make it  
18 unprofitable for a hypothetical monopolist if ad  
19 exchange is to raise prices?  
20 MS. YOUNG: Objection; form.  
21 Go ahead.  
22 A. I do consider that.  
23 Q. (BY MR. EWALT) My question, sir, was: In  
24 your reports, do you express an opinion whether, in  
25 response to a SSNIP, publishers would switch to

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1 selling enough of their inventory directly without  
2 using an ad exchange to make it unprofitable for a  
3 hypothetical monopolist of ad exchanges to raise  
4 prices?  
5 MS. YOUNG: Same objection.  
6 A. I do express an opinion.  
7 Q. (BY MR. EWALT) Where?  
8 A. Could you repeat the question again because I  
9 just want to make sure I have it?  
10 Q. Absolutely.  
11 In your reports, do you express an  
12 opinion, whether in response to a SSNIP, publishers  
13 would switch to selling enough of their inventory  
14 directly without using an ad exchange to make it  
15 unprofitable for a hypothetical monopolist of ad  
16 exchanges to raise prices?  
17 MS. YOUNG: Same objection.  
18 A. Right at the moment I can't find the sort of  
19 explicit crisp statement, although the look from  
20 paragraph -- at pages 69 to 75 of my opening report,  
21 as simple evidences as to the lack of  
22 substitutability.  
23 Q. (BY MR. EWALT) All right. Let's switch gears  
24 again to advertiser buying tools.  
25 At a high level, do advertisers try to have



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<p>1 their advertisements shown to consumers who might buy</p> <p>2 their products?</p> <p>3 A. Yes, for the majority of advertisers.</p> <p>4 Q. Can advertisers reach consumers using display</p> <p>5 advertising on the open web?</p> <p>6 A. They can.</p> <p>7 Q. Can advertisers reach consumers using</p> <p>8 advertiser -- advertising on social media websites</p> <p>9 like Instagram and TikTok?</p> <p>10 A. They can.</p> <p>11 Q. Can advertisers reach consumers using</p> <p>12 advertising on retail websites like Amazon and</p> <p>13 Walmart?</p> <p>14 A. Depending on whether their products are</p> <p>15 available in those platforms, yes.</p> <p>16 Q. Can advertisers reach consumers using</p> <p>17 advertising in mobile apps?</p> <p>18 A. It is possible.</p> <p>19 Q. Can Advertisers reach consumers through</p> <p>20 Direct Deals with publishers?</p> <p>21 MS. YOUNG: Objection; form.</p> <p>22 A. If they strike a direct deal with the right</p> <p>23 sort of publisher, yes.</p> <p>24 Q. (BY MR. EWALT) Can advertisers reach</p> <p>25 consumers using advertising in streaming services or</p>	<p>1 A. Yes, they can.</p> <p>2 Q. Do advertisers have other ways of reaching</p> <p>3 consumers that I haven't asked you about?</p> <p>4 MS. YOUNG: Objection; form.</p> <p>5 A. Yes.</p> <p>6 Q. (BY MR. EWALT) Is fair to say that</p> <p>7 advertisers have a lot of options to reach consumers?</p> <p>8 MS. YOUNG: Objection; form.</p> <p>9 A. There are a lot of channels, distinct</p> <p>10 channels by which advertisers can reach consumers.</p> <p>11 Q. (BY MR. EWALT) If advertisers find that</p> <p>12 display advertising on the open web is not performing</p> <p>13 as well relative to other options, can they shift</p> <p>14 their spending away from open web display advertising</p> <p>15 and towards other options?</p> <p>16 MS. YOUNG: Objection; form.</p> <p>17 A. Are you -- are you asking me if they're</p> <p>18 allowed to do so?</p> <p>19 Q. (BY MR. EWALT) I'm -- I'll just ask the</p> <p>20 question again.</p> <p>21 If advertisers find that display advertising</p> <p>22 on the open web is not performing as well relative to</p> <p>23 other options, can they shift their advertising</p> <p>24 spending away from open web display advertising and</p> <p>25 towards other options?</p>
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<p>1 connected TV?</p> <p>2 A. They -- if advertise -- advertisements are</p> <p>3 placed on those channels, yes.</p> <p>4 Q. Can advertisers reach consumers by</p> <p>5 advertising in podcasts?</p> <p>6 A. Yes, so long as the consumers are -- are</p> <p>7 listening to the ads in the podcast.</p> <p>8 Q. Can advertisers reach consumers by</p> <p>9 advertising via e-mail?</p> <p>10 A. It is possible for them to do so.</p> <p>11 Q. Can advertisers reach consumers using search</p> <p>12 advertising?</p> <p>13 A. It is possible for them to do so.</p> <p>14 Q. Can advertisers reach consumers by</p> <p>15 advertising on broadcasts or cable TV?</p> <p>16 A. It is possible for them to do so.</p> <p>17 Q. Can advertisers reach consumers by</p> <p>18 advertising on radio?</p> <p>19 A. It is possible for -- for them to reach --</p> <p>20 for advertisers to reach consumers via radio.</p> <p>21 Q. Can advertisers reach consumers by</p> <p>22 advertising in newspapers and magazines?</p> <p>23 A. Yes, they can reach some consumers that way.</p> <p>24 Q. Can advertisers reach consumers by</p> <p>25 advertising with billboards?</p>	<p>1 MS. YOUNG: Same objection.</p> <p>2 A. They could shift that spending to any</p> <p>3 activity that they so chose.</p> <p>4 Q. (BY MR. EWALT) Would you please turn to</p> <p>5 Paragraph 225 of your opening report.</p> <p>6 All right. That paragraph reads: "The</p> <p>7 characteristics of ad-buying tools for small</p> <p>8 advertisers for buying open web display advertising</p> <p>9 include connecting with exchanges and sellers of ad</p> <p>10 inventory, optimizing demographic and cross device</p> <p>11 targeting, managing advertising campaigns and</p> <p>12 remarketing campaigns, collecting data on campaign's</p> <p>13 performance, et cetera."</p> <p>14 Do you see that?</p> <p>15 A. Yes.</p> <p>16 Q. Does that sentence identify the main</p> <p>17 characteristics of ad-buying tools for small</p> <p>18 advertisers?</p> <p>19 A. Yes, pretty much.</p> <p>20 Q. Do DSPs connect with exchangers and sellers</p> <p>21 of ad inventory?</p> <p>22 MS. YOUNG: Objection; form.</p> <p>23 A. DSPs?</p> <p>24 Q. (BY MR. EWALT) Yes.</p> <p>25 A. You mean demand side?</p>

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<p style="text-align: right;">Page 78</p> <p>1 Q. How about this: Do large advertiser buying 2 tools connect with exchanges and sellers about 3 inventory? 4 A. Yes. 5 Q. Do large advertiser buying tools optimize 6 demographic and cross device targeting? 7 A. Yes. 8 Q. Do large advertiser buying tools manage 9 advertising campaigns and remarketing campaigns? 10 A. Yes. 11 Q. Do large advertiser buying tools collect data 12 on campaign's performance? 13 A. I believe so. 14 Q. Would you please turn to Paragraphs 233 and 15 234 of your opening report? 16 A. Yes. 17 Q. Would you agree that a conversation with 18 Professor Chandler is the only basis for your opinion 19 that there is industry or public recognition of a 20 market for ad-buying tools for small advertisers? 21 MS. YOUNG: Objection; form. 22 A. It is the -- it is -- for industry 23 recognition, yes, it is my basis. 24 Q. (BY MR. EWALT) And your only basis? 25 MS. YOUNG: Objection; form.</p>	<p style="text-align: right;">Page 80</p> <p>1 not to answer this question. This is going to 2 contents of communications between the testifying 3 expert and staff. 4 MR. EWALT: I just asked who was 5 present. I didn't ask what the content of the 6 communication was. 7 MS. YOUNG: You may answer who was 8 present if you recall, but not -- 9 A. I don't recall. I don't recall who was 10 present. 11 Q. (BY MR. EWALT) Do you recall whether any 12 lawyers were present? 13 A. I do not recall. 14 Q. Do you recall what topics you discussed? 15 A. I -- I recall some of them, yeah. Yes, 16 there's -- there are ones that we discussed. My 17 recollection is contained in the ones that I relied 18 upon in the report. 19 Q. Okay. What did Professor Chandler say about 20 industry participants' views concerning a market for 21 ad-buying tools for small advertisers? 22 A. He said that small advertisers were defined 23 by having a relatively small amount of monthly 24 advertising, and that one reason they are a distinct 25 market is that they have too little advertising</p>
<p style="text-align: right;">Page 79</p> <p>1 A. It's the only basis that I cited in the 2 report. 3 Q. (BY MR. EWALT) And that conversation with 4 Professor Chandler took place on June 4, 2024? 5 A. Yes. 6 Q. That was three days before your report was 7 finalized? 8 A. Yes. 9 Q. How long did the conversation with Professor 10 Chandler last? 11 A. I don't recall. 12 Q. Was it more than an hour? 13 A. I don't recall the exact time. Probably not 14 much more if it was that. 15 Q. What's your best estimate of how long it 16 took? 17 A. Maybe an hour. 18 Q. Who was present for the conversation? 19 A. Oh, I don't remember. 20 Q. Was it just you and Professor Chandler? 21 A. I don't believe so, but I can't remember who 22 else was there. 23 Q. Were any members of your support team from 24 Keystone present? 25 MS. YOUNG: So I'm going to instruct you</p>	<p style="text-align: right;">Page 81</p> <p>1 expenditure to access some of the more sophisticated 2 products that are available that may have different 3 substantive degrees of -- of pricing for -- to 4 advertisers for the use of those products. 5 Q. Was -- was any record made of the 6 conversation between you and Professor Chandler? 7 A. In my -- I -- I had a set of questions that I 8 wanted to ask him. And I -- 9 MS. YOUNG: I'm going to instruct -- so 10 just to be clear, right? And I want to follow the 11 expert stip, and the expert stip forecloses the 12 disclosure discovery of notes and drafts of testifying 13 experts unless he relied upon them so... 14 MR. EWALT: He did rely on them. He 15 cited them here. 16 MS. YOUNG: Yeah. And he said that 17 everything he relied upon is stated in his report. So 18 I just want to caution the witness with that. 19 And I'm allowing you to ask the 20 questions, but I just want to make clear that there is 21 a line that the parties have agreed to draw here. 22 So you're not allowed to discover the 23 contents of any communications between counsel -- 24 (Speaking simultaneously.) 25 MS. YOUNG: Yes.</p>



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<p>1 MR. EWALT: Yeah.</p> <p>2 MS. YOUNG: Go ahead.</p> <p>3 Q. (BY MR. EWALT) Okay. So the question is:</p> <p>4 Was a record made of the conversation?</p> <p>5 A. No.</p> <p>6 Q. Okay. But you wrote up questions before the</p> <p>7 conversation to ask Professor Chandler.</p> <p>8 Is that fair?</p> <p>9 A. I had a -- a list of questions. I cannot</p> <p>10 recall that if I -- where I wrote them. It may have</p> <p>11 been somewhere, but more likely than not it was on my</p> <p>12 little white board ahead of the conversation.</p> <p>13 Q. You probably erased your white board since</p> <p>14 then?</p> <p>15 A. Yeah, I have a white board that sits right in</p> <p>16 front of my computer screen where I -- it works on</p> <p>17 Zoom. It's a good thing. You should get it. Well,</p> <p>18 it's -- I find it useful.</p> <p>19 And that's where often I write stuff.</p> <p>20 And then I use the stuff and whatever I</p> <p>21 was going to use it, off it goes.</p> <p>22 That's my --</p> <p>23 Q. All right.</p> <p>24 A. -- process.</p> <p>25 Q. Okay. Well, let's -- can you please turn to</p>	<p>1 advertisers would respond to a SSNIP for ad-buying</p> <p>2 tools for small advertisers?</p> <p>3 A. I may not have explicitly done so, but some</p> <p>4 of the factors of substitution that I considered are</p> <p>5 common to both.</p> <p>6 Q. You know that large advertisers account for a</p> <p>7 large portion of the total spending on ad-buying tools</p> <p>8 for small advertisers, right?</p> <p>9 MS. YOUNG: Objection; form.</p> <p>10 A. They account for a reasonable proportion,</p> <p>11 yes.</p> <p>12 Q. (BY MR. EWALT) Reasonably large proportion?</p> <p>13 MS. YOUNG: Objection; form.</p> <p>14 A. I can't --</p> <p>15 MS. YOUNG: Go ahead.</p> <p>16 A. I can't remember the exact proportion.</p> <p>17 Q. (BY MR. EWALT) Please turn to Page 92 of your</p> <p>18 opening report.</p> <p>19 Does Figure 8 show a slide from a Google</p> <p>20 presentation about large and small advertisers using</p> <p>21 different ad-buying tools?</p> <p>22 A. Yes.</p> <p>23 Q. In the top left corner of the slide, do you</p> <p>24 see where it says: "Google ads customers and</p> <p>25 revenue"?</p>
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<p>1 Page 81 in your opening report. Page 81.</p> <p>2 A. Yep.</p> <p>3 Q. You're there. Great.</p> <p>4 Let's take a look at Paragraph 237. It</p> <p>5 begins: "A small increase in the price of ad-buying</p> <p>6 tools for small advertisers for buying open web</p> <p>7 display advertising above competitive levels would not</p> <p>8 result in significant substitution by small</p> <p>9 advertisers for other products. In response to an</p> <p>10 increase in price, small advertisers would have four</p> <p>11 options."</p> <p>12 Do you see that?</p> <p>13 A. Yes.</p> <p>14 Q. So when using the hypothetical monopolist</p> <p>15 test to define your market for ad-buying tools for</p> <p>16 small advertisers, were you focused on how small</p> <p>17 advertisers would respond to a SSNIP?</p> <p>18 A. Yes.</p> <p>19 Q. Both large advertisers and small advertisers</p> <p>20 use the tools that you refer to as ad-buying tools for</p> <p>21 small advertisers.</p> <p>22 Is that fair?</p> <p>23 MS. YOUNG: Objection; form.</p> <p>24 A. Yes.</p> <p>25 Q. (BY MR. EWALT) Did you analyze how large</p>	<p>1 A. Yes.</p> <p>2 Q. Are large advertisers sometimes called head</p> <p>3 advertisers?</p> <p>4 A. Yes.</p> <p>5 [REDACTED]</p> <p>6 [REDACTED]</p> <p>7 [REDACTED]</p> <p>8 [REDACTED]</p> <p>9 [REDACTED]</p> <p>10 [REDACTED]</p> <p>11 [REDACTED]</p> <p>12 Q. How do you know that?</p> <p>13 A. Well, that's what that -- that says.</p> <p>14 Q. Well, it says "Google Ads" in the top left</p> <p>15 corner. It says: "Google Ads customers and revenue."</p> <p>16 A. Well, I -- I -- I look at the -- the side</p> <p>17 there which has Google Ads being used, but also these</p> <p>18 other different ad products being used as well.</p> <p>19 So it's -- it's -- that -- that's what I</p> <p>20 interpreted that revenue as, but I see what -- I see</p> <p>21 that it might have another interpretation.</p> <p>22 [REDACTED]</p> <p>23 [REDACTED]</p> <p>24 [REDACTED]</p> <p>25 [REDACTED]</p>

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<p style="text-align: right;">Page 86</p> <p>1 [REDACTED] 2 [REDACTED] 3 [REDACTED] 4 Q. (BY MR. EWALT) And do large advertisers use 5 both Google Ads and DV360? 6 A. Yes. 7 MS. YOUNG: Objection; form. 8 Sorry. Just speak over you. Go ahead. 9 A. Yes. 10 Q. (BY MR. EWALT) If a firm providing ad-buying 11 tools for small advertisers were thinking about 12 raising prices, would it have to consider potential 13 responses from both small advertisers and large 14 advertisers? 15 MS. YOUNG: Objection; form. 16 A. It would -- it would have to consider them, 17 yes. 18 Q. (BY MR. EWALT) Responses from large 19 advertisers would have a big impact on the provider of 20 ad-buying tools for small advertisers because large 21 advertisers represent a big part of the total spending 22 on ad-buying tools for small advertisers. 23 Do you agree with that? 24 MS. YOUNG: Objection; form. 25 A. I think this is what this says, that large</p>	<p style="text-align: right;">Page 88</p> <p>1 A. I didn't engage in that analysis, but I 2 believe that other experts have. 3 MS. YOUNG: Counsel, we've been going 4 for over an hour. When you reach a good stopping 5 point on this line of questioning, I suggest a break. 6 MR. EWALT: Okay. 7 Q. (BY MR. EWALT) Did you examine the prices 8 charged by any non-Google ad-buying tools for small 9 advertisers? 10 A. I examined -- I didn't examine the -- I can't 11 recall if I examined the prices for those. 12 MR. EWALT: Okay. We can go off the 13 record. 14 THE VIDEOGRAPHER: This is now the end 15 of Video 2 of Joshua Gans. We're off the record at 16 11:23. 17 (Break from 11:23 a.m. to 11:38 a.m.) 18 THE VIDEOGRAPHER: Now back on the 19 record. Video 3 of Joshua Gans. The time is 20 approximately 11:38. 21 Q. (BY MR. EWALT) Welcome back, Professor Gans. 22 During the break, did you discuss the 23 substance of this case with counsel? 24 MS. YOUNG: Again, I'm going to object 25 to this line of questioning as to going into the</p>
<p style="text-align: right;">Page 87</p> <p>1 advertisers place a lot of value on the advertisers 2 that solely go through Google Ads. 3 Q. (BY MR. EWALT) Right. But I'm not asking 4 about this slide right now. 5 A. Oh, I'm sorry. 6 Q. My question is about the responses, whether 7 the responses from large advertisers would have a big 8 impact -- strike that. 9 The responses from large advertisers to 10 a price increase would have a big impact on the 11 profitability of the provider of ad-buying tools for 12 small advertisers, right? 13 MS. YOUNG: Objection; form. 14 A. If those large advertisers were subject to 15 a -- a 5 percent -- you know, a significant increase 16 in price. The profitability of that increase in price 17 would have to take into account the large advertising 18 response. 19 Q. (BY MR. EWALT) Did you analyze whether large 20 advertisers would shift enough spending from ad-buying 21 tools for small advertisers to ad-buying tools for 22 large advertisers to make it unprofitable for a 23 hypothetical monopolist of ad-buying tools for small 24 advertisers to impose a SSNIP? 25 MS. YOUNG: Objection; form.</p>	<p style="text-align: right;">Page 89</p> <p>1 contents of communications with counsel. 2 You can ask him if he had discussions 3 with counsel but not about the contents. So I'm going 4 to instruct the witness not to answer the question. 5 MR. EWALT: Okay. Based on that 6 instruction, we'll continue on another line of 7 questioning. 8 Q. (BY MR. EWALT) So, Professor Gans, does 9 Criteo offer an ad-buying tool for small advertisers? 10 A. You'll forgive me that sometimes the -- 11 Q. Of course. 12 A. -- exhibit is few and far between. 13 Q. How about Paragraph 229 of your opening 14 report? 15 A. Yes. Just these names. 16 Yes. 17 Q. Does Criteo offer an ad-buying tool for small 18 advertisers? 19 A. Yes. 20 Q. Did you examine the price charged by Criteo 21 ad-buying tools for small advertisers? 22 A. I did not look at the prices Criteo charged 23 over time for small -- for tools for small 24 advertisers. 25 Q. Did you look at the prices that any firms</p>

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<p>1 other than Google charge, for small advertiser</p> <p>2 ad-buying tools?</p> <p>3 A. I cannot recall if I saw or thought about any</p> <p>4 particular price that was charged by the competitors,</p> <p>5 the other providers in the ad-buying tools for small</p> <p>6 advertiser market.</p> <p>7 (Marked Gans Exhibit No. 5.)</p> <p>8 Q. (BY MR. EWALT) I'm handing you what's been</p> <p>9 marked as Exhibit 5, which is Professor Baye's report.</p> <p>10 A. All right.</p> <p>11 Q. And ask you to turn to Page 603, Page 603.</p> <p>12 (Discussion off the record.)</p> <p>13 Q. (BY MR. EWALT) It's towards the end. Not</p> <p>14 quite all the way to the end.</p> <p>15 A. Yes. Just a second here.</p> <p>16 Right.</p> <p>17 Q. (BY MR. EWALT) You there?</p> <p>18 A. Yes.</p> <p>19 Q. All right. And Figure 5 on Page 604 of</p> <p>20 Professor Baye's report shows the price of several</p> <p>21 advertising buying tools over time.</p> <p>22 Do you agree with that?</p> <p>23 A. Just a sec. Let me refresh my memory on this</p> <p>24 chart.</p> <p>25 MS. YOUNG: Did you say Page 604?</p>	<p>1 [REDACTED]</p> <p>2 Q. (BY MR. EWALT) Do you have any reason to</p> <p>3 doubt the accuracy of Figure 5?</p> <p>4 MS. YOUNG: Objection; form.</p> <p>5 A. I cannot recall investigating it closely. So</p> <p>6 I wouldn't want to warrant its accuracy or otherwise</p> <p>7 at this stage.</p> <p>8 Q. (BY MR. EWALT) But you don't have any reason</p> <p>9 to think it's inaccurate, do you?</p> <p>10 MS. YOUNG: Objection; form.</p> <p>11 A. I -- I haven't investigated its -- its</p> <p>12 accuracy.</p> <p>13 [REDACTED]</p> <p>14 [REDACTED]</p> <p>15 [REDACTED]</p> <p>16 [REDACTED]</p> <p>17 Q. Is it fair to say that you don't know what a</p> <p>18 competitive price would be for ad-buying tools for</p> <p>19 small advertisers?</p> <p>20 MS. YOUNG: Objection; form.</p> <p>21 A. I did not conduct an analysis of the -- what</p> <p>22 the competitive benchmark price would be.</p> <p>23 Q. (BY MR. EWALT) Without knowing the</p> <p>24 competitive benchmark, can an economist perform a</p> <p>25 hypothetical monopolist test?</p>
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<p>1 MR. EWALT: 603.</p> <p>2 MS. YOUNG: 603.</p> <p>3 Objection; form.</p> <p>4 A. Okay. Do you want to ask your question</p> <p>5 again?</p> <p>6 Q. (BY MR. EWALT) Yes, I do.</p> <p>7 Do you agree that Figure 5, on Page 603 of</p> <p>8 Professor Baye's report, shows the prices of several</p> <p>9 advertiser buying tools over time?</p> <p>10 MS. YOUNG: Objection; form.</p> <p>11 Go ahead.</p> <p>12 A. It's a measure of their per customer revenue.</p> <p>13 Q. (BY MR. EWALT) And that's one measure of</p> <p>14 price?</p> <p>15 A. Yes.</p> <p>16 Q. Professor Baye's Figure 5 shows the price of</p> <p>17 Criteo's ad-buying tool for small advertisers in light</p> <p>18 blue.</p> <p>19 Do you see that?</p> <p>20 A. Yes.</p> <p>21 [REDACTED]</p> <p>22 [REDACTED]</p> <p>23 [REDACTED]</p> <p>24 [REDACTED]</p> <p>25 [REDACTED]</p>	<p>1 MS. YOUNG: Objection; form.</p> <p>2 A. Yes, they can.</p> <p>3 Q. (BY MR. EWALT) All right. Would you please</p> <p>4 turn to paragraph -- you can put away -- put aside</p> <p>5 Professor Baye's report.</p> <p>6 And I'll ask you to please turn to</p> <p>7 Paragraph 170 of your rebuttal report.</p> <p>8 A. Yes.</p> <p>9 Q. Paragraph 170 begins: "Google conducted</p> <p>10 another HMT experiment in 2018."</p> <p>11 Do you see that?</p> <p>12 A. Yes.</p> <p>13 (Marked Gans Exhibit No. 6.)</p> <p>14 Q. (BY MR. EWALT) So I'm handing you what's been</p> <p>15 marked as Exhibit 10. It's a document bearing -- oh,</p> <p>16 excuse me. I'm sorry.</p> <p>17 I'm handing you what's been marked as</p> <p>18 Exhibit 6. It's a document with the first page</p> <p>19 bearing Bates No. GOOG-NE-04732984. It's titled</p> <p>20 "Demand Elasticity on AdX Web Publishers," and it's</p> <p>21 dated May 9, 2018.</p> <p>22 Do you see that?</p> <p>23 A. Yes.</p> <p>24 Q. Is Exhibit 6 the HMT experiment that you</p> <p>25 referenced in Paragraph 170 of your rebuttal report?</p>

24 (Pages 90 - 93)

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1 A. Yes.  
2 [REDACTED]  
3 [REDACTED]  
4 [REDACTED]  
5 [REDACTED]  
6 [REDACTED]  
7 Q. And that's a part of the experiment that you  
8 were discussing in Paragraph 170 of your rebuttal  
9 report.  
10 Is that fair?  
11 A. Yes.  
12 [REDACTED]  
13 [REDACTED]  
14 [REDACTED]  
15 [REDACTED]  
16 [REDACTED]  
17 [REDACTED]  
18 [REDACTED]  
19 [REDACTED]  
20 [REDACTED]  
21 [REDACTED]  
22 [REDACTED]  
23 [REDACTED]  
24 [REDACTED]  
25 Q. But it would not be itself an application of

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1 the hypothetical monopolist test; is that correct?  
2 A. Well, this --  
3 MS. YOUNG: Objection; form.  
4 I -- sorry. Go ahead.  
5 A. Well, this document was from Google's  
6 perspective not designed to apply the hypothetical  
7 monopolist test.  
8 It was -- when I used it, it was  
9 information that I used to inform how an economist in  
10 this case would look at a hypothetical monopolist  
11 test.  
12 [REDACTED]  
13 [REDACTED]  
14 [REDACTED]  
15 [REDACTED]  
16 [REDACTED]  
17 [REDACTED]  
18 [REDACTED]  
19 [REDACTED]  
20 [REDACTED]  
21 [REDACTED]  
22 [REDACTED]  
23 [REDACTED]  
24 [REDACTED]  
25 [REDACTED]

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1 [REDACTED]  
2 [REDACTED]  
3 [REDACTED]  
4 [REDACTED]  
5 [REDACTED]  
6 [REDACTED]  
7 [REDACTED]  
8 [REDACTED]  
9 [REDACTED]  
10 [REDACTED]  
11 [REDACTED]  
12 [REDACTED]  
13 [REDACTED]  
14 [REDACTED]  
15 [REDACTED]  
16 [REDACTED]  
17 [REDACTED]  
18 [REDACTED]  
19 [REDACTED]  
20 [REDACTED]  
21 [REDACTED]  
22 Q. Right.  
23 A. And you could therefore calculate what --  
24 that the elasticity of demand was such that just  
25 looking at the buy side alone would not find -- you

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1 would find it profitable to increase prices.  
2 Q. But this analysis of profit looks at the buy  
3 plus sell side, correct?  
4 A. Well, that calculation in that executive  
5 summary does, yes.  
6 Q. And then did you do any calculation beyond  
7 what appears within Exhibit 6 to assess the  
8 profitability for Google Ads standing alone of this  
9 price change?  
10 MS. YOUNG: Objection; form.  
11 A. I didn't -- I didn't report that number in  
12 this -- in -- in my report.  
13 Q. (BY MR. EWALT) Okay. You can put that aside.  
14 I want to talk about something else now,  
15 monopoly power. Hopefully this order is seeming  
16 familiar to you?  
17 A. Yeah.  
18 Q. Okay.  
19 A. Good.  
20 (Speaking simultaneously.)  
21 Q. (BY MR. EWALT) Can a firm obtain monopoly  
22 power without engaging in legal antitrust conduct?  
23 A. Can they --  
24 MS. YOUNG: Sorry. Objection; form.  
25 A. Can they, yes.

25 (Pages 94 - 97)

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<p style="text-align: right;">Page 98</p> <p>1 Q. (BY MR. EWALT) A firm obtain monopoly power</p> <p>2 by offering high quality products that its competitors</p> <p>3 can't match?</p> <p>4 MS. YOUNG: Objection; form.</p> <p>5 A. It is possible that firms can do that.</p> <p>6 Q. (BY MR. EWALT) Can a firm obtain monopoly</p> <p>7 power by holding unique proprietary technology?</p> <p>8 MS. YOUNG: Objection; form.</p> <p>9 A. It -- it can do that, yes.</p> <p>10 Q. (BY MR. EWALT) Does DFP have unique product</p> <p>11 features as compared to other publisher ad servers?</p> <p>12 MS. YOUNG: Objection; form.</p> <p>13 A. It -- it may have -- it may have some</p> <p>14 distinctive product differentiation with other</p> <p>15 publishers' ad servers.</p> <p>16 Q. (BY MR. EWALT) Do those unique features for</p> <p>17 DFP make it a relatively high quality publisher ad</p> <p>18 server?</p> <p>19 MS. YOUNG: Objection; form.</p> <p>20 A. I -- I do not know if that's the case.</p> <p>21 Q. (BY MR. EWALT) Does AdX have unique product</p> <p>22 features as compared to other ad exchanges?</p> <p>23 MS. YOUNG: Objection; form.</p> <p>24 A. I -- I am not aware of any specific features</p> <p>25 that are necessarily unique to Google.</p>	<p style="text-align: right;">Page 100</p> <p>1 Q. In your opinion, does Google have monopoly</p> <p>2 power in the market for ad exchanges?</p> <p>3 MS. YOUNG: Objection; form.</p> <p>4 A. In my opinion, it does have monopoly power in</p> <p>5 the market for ad exchanges for open web display</p> <p>6 advertising.</p> <p>7 Q. (BY MR. EWALT) When did Google obtain</p> <p>8 monopoly power in the market for ad exchanges that</p> <p>9 transact open web display advertising?</p> <p>10 A. I did not engage in a analysis of the -- of</p> <p>11 the timing of that. I was interested in the state of</p> <p>12 the market part and then after the conduct that was</p> <p>13 investigated.</p> <p>14 Q. During which periods of time has Google had</p> <p>15 monopoly power in the market for ad exchanges</p> <p>16 transacting open web display advertising?</p> <p>17 A. It has had that -- it has that degree of</p> <p>18 market power -- monopoly power most certainly.</p> <p>19 As I said, I didn't examine at times</p> <p>20 other than were relevant for this case, but certainly</p> <p>21 has it -- sorry -- certainly has it over the last</p> <p>22 significant period of time.</p> <p>23 I haven't got any dates that I pinned</p> <p>24 down for this thing.</p> <p>25 Q. So you don't -- you haven't pinned down any</p>
<p style="text-align: right;">Page 99</p> <p>1 Q. (BY MR. EWALT) Does Google Ads have unique</p> <p>2 product features as compared to other ad-buying tools</p> <p>3 for small advertisers?</p> <p>4 A. Yes.</p> <p>5 MS. YOUNG: Objection; form.</p> <p>6 Go ahead.</p> <p>7 A. Yes.</p> <p>8 Q. (BY MR. EWALT) Do these unique features make</p> <p>9 Google Ads a relatively high quality ad-buying tool</p> <p>10 for small advertisers?</p> <p>11 MS. YOUNG: Objection; form.</p> <p>12 A. Those features mean that compared to other</p> <p>13 ad-buying tools for small advertisers there are</p> <p>14 distinctive features whereby advertisers can derive</p> <p>15 value from Google relative to those others.</p> <p>16 Q. (BY MR. EWALT) In your reports, have you</p> <p>17 expressed the opinion that Google has monopoly power</p> <p>18 in the market for ad-buying tools for large</p> <p>19 advertisers?</p> <p>20 A. I have not.</p> <p>21 Q. In your reports, have you expressed the</p> <p>22 opinion that Google has a dangerous probability of</p> <p>23 achieving monopoly power in the market for ad-buying</p> <p>24 tools for large advertisers?</p> <p>25 A. I have not.</p>	<p style="text-align: right;">Page 101</p> <p>1 dates for when Google had monopoly power in the market</p> <p>2 for ad exchanges transacting open web display</p> <p>3 advertising?</p> <p>4 MS. YOUNG: Objection; form.</p> <p>5 A. The actual pending the date, which was in</p> <p>6 some sort of transition even if that were a possible</p> <p>7 thing, was not something I analyzed.</p> <p>8 Q. (BY MR. EWALT) In your opinion, does Google</p> <p>9 have monopoly power in the market for publisher ad</p> <p>10 servers?</p> <p>11 A. Yes.</p> <p>12 Q. When did Google obtain monopoly power in the</p> <p>13 market for publisher ad servers?</p> <p>14 A. I do --</p> <p>15 MS. YOUNG: Objection; form.</p> <p>16 Sorry. Go ahead.</p> <p>17 A. I do not know exactly when it did obtain that</p> <p>18 power. But it certainly achieved that power by 2022</p> <p>19 and then at the time of writing my report.</p> <p>20 Q. (BY MR. EWALT) How did Google obtain monopoly</p> <p>21 power in the market for publisher ad servers?</p> <p>22 A. I didn't analyze all of the sources of how it</p> <p>23 obtained that monopoly power. But one of the things</p> <p>24 that enhanced its monopoly power in the market for ad</p> <p>25 serving -- servers was its own conduct.</p>



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<p>1 Q. Which conduct in particular do you have in</p> <p>2 mind?</p> <p>3 A. I would -- I would say the -- the conduct</p> <p>4 most salient for that was the conduct that I call the</p> <p>5 tying conduct of Google.</p> <p>6 Q. Okay. In your opinion, does Google have</p> <p>7 monopoly power in the market for ad-buying tools for</p> <p>8 small advertisers?</p> <p>9 MS. YOUNG: Objection; form.</p> <p>10 A. Yes.</p> <p>11 Q. (BY MR. EWALT) When did Google obtain</p> <p>12 monopoly power in the market for ad-buying tools for</p> <p>13 small advertisers?</p> <p>14 A. I don't identify a -- a particular date or</p> <p>15 investigate a particular date for that.</p> <p>16 But it's as soon as it launched its</p> <p>17 products for display advertising, it put in the basis</p> <p>18 that was significant in generating its monopoly</p> <p>19 position in that market.</p> <p>20 Q. Is it your view that Google ads has had</p> <p>21 monopoly power in the market for ad-buying tools for</p> <p>22 small advertisers from the very moment it launched</p> <p>23 ad-buying tool for small advertisers --</p> <p>24 A. It --</p> <p>25 Q. -- for open web display advertising?</p>	<p>1 that I observed Google having in that market.</p> <p>2 Q. And so it's your view that they had monopoly</p> <p>3 power in the market from the moment they entered?</p> <p>4 A. No. My view is that they had the basis to</p> <p>5 attain the monopoly power that they had -- that I</p> <p>6 investigated at the time that they entered.</p> <p>7 Q. So they had the ability to obtain monopoly</p> <p>8 power as of the moment they entered but they did not</p> <p>9 actually maintain -- obtain monopoly power.</p> <p>10 Is that your testimony?</p> <p>11 MS. YOUNG: Objection; form.</p> <p>12 A. I -- I did not investigate whether they had</p> <p>13 monopoly power at that point or not. I just don't</p> <p>14 have an opinion on it.</p> <p>15 Q. (BY MR. EWALT) Do you have an opinion as to</p> <p>16 when Google obtained monopoly power in the market for</p> <p>17 ad-buying tools for small advertisers?</p> <p>18 MS. YOUNG: Objection; form.</p> <p>19 Go ahead.</p> <p>20 A. No, but it was prior to -- prior to 2000 --</p> <p>21 when it started engaging in behavior that started to</p> <p>22 tie its -- the -- own advertising -- own ad server</p> <p>23 platform to its own ad exchange.</p> <p>24 Q. (BY MR. EWALT) Okay. Is a firm's market</p> <p>25 share relevant to a conclusion about whether the firm</p>
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<p>1 A. It is my view that it launched it with a</p> <p>2 basis of how it launched it that would be a</p> <p>3 significant factor in its -- in the monopoly power</p> <p>4 that I observed during my investigation.</p> <p>5 Q. I'm just trying to make sure I understand</p> <p>6 this correctly, though.</p> <p>7 Did -- is it your view that from the</p> <p>8 very moment that Google Ads became available for</p> <p>9 advertisers to buy open web display advertising that</p> <p>10 Google had monopoly power in the market for ad-buying</p> <p>11 tools for small advertisers buying open web display</p> <p>12 advertising?</p> <p>13 A. In my report I discuss the basis for Google's</p> <p>14 monopoly power in the market for small -- for</p> <p>15 ad-buying tools for small advertisers.</p> <p>16 And at around Page 143, I discussed how</p> <p>17 in 2008 Google automatically enrolled Google Ads</p> <p>18 search advertisers into buying display advertising via</p> <p>19 the same tool, which created a large base for</p> <p>20 advertisers using Google Ads to purchase display</p> <p>21 advertising.</p> <p>22 So that's the basis.</p> <p>23 Q. That was the basis for entering the market,</p> <p>24 correct?</p> <p>25 A. And also the basis for the monopoly power</p>	<p>1 has monopoly power?</p> <p>2 MS. YOUNG: Objection; form.</p> <p>3 A. Yes, it can be relevant.</p> <p>4 Q. (BY MR. EWALT) Does market share refer to the</p> <p>5 proportion of total sales or output in a market that</p> <p>6 is accounted for by a particular firm?</p> <p>7 A. That is one way of constructing market share.</p> <p>8 Q. Can a high market share be an indicator of</p> <p>9 monopoly power?</p> <p>10 A. A high market share can be an indicator that</p> <p>11 the firm has monopoly power.</p> <p>12 Q. What do you consider to be a high market</p> <p>13 share?</p> <p>14 MS. YOUNG: Objection; form.</p> <p>15 A. I don't have any precise threshold as it --</p> <p>16 as monopoly power depends on other factors as well</p> <p>17 and -- that interact with market share in interpreting</p> <p>18 whether someone has market power.</p> <p>19 Q. (BY MR. EWALT) Is it possible for a firm with</p> <p>20 a high market share not to have monopoly power?</p> <p>21 MS. YOUNG: Objection; form.</p> <p>22 A. If I were to answer this situation in the</p> <p>23 context of models and markets sometimes the way</p> <p>24 economists model them, it is possible.</p> <p>25 But if I were considering the way in</p>

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<p style="text-align: right;">Page 106</p> <p>1 which we normally assemble evidence for a -- for an</p> <p>2 antitrust action, that would interact with the</p> <p>3 definition of the market itself.</p> <p>4 So it's a little bit tricky.</p> <p>5 Q. (BY MR. EWALT) Okay. Well, let me ask you as</p> <p>6 an economist.</p> <p>7 As an economist, is it possible for a firm</p> <p>8 with a high market share not to have monopoly power?</p> <p>9 MS. YOUNG: Objection; form.</p> <p>10 Go ahead.</p> <p>11 A. Yes, it's possible.</p> <p>12 Q. (BY MR. EWALT) Can a firm with low market</p> <p>13 share have monopoly power?</p> <p>14 A. Yes, it is possible.</p> <p>15 Q. How can that happen?</p> <p>16 A. Again, it depends on the market context.</p> <p>17 But, remember, the definition of</p> <p>18 monopoly power is, for instance, to be able to</p> <p>19 increase price without losing -- above competitive</p> <p>20 levels without losing a -- a significant number of</p> <p>21 customers.</p> <p>22 Firms with small market shares in</p> <p>23 something that would be a market from the point of</p> <p>24 view of an economic analysis can have that ability.</p> <p>25 Q. So is it your view that any firm that can</p>	<p style="text-align: right;">Page 108</p> <p>1 controls a product or platform with network effects</p> <p>2 can possess significant market power."</p> <p>3 Do you see that?</p> <p>4 A. Yes.</p> <p>5 Q. If network effects are present in a market,</p> <p>6 does that mean that every firm in that market has</p> <p>7 monopoly power?</p> <p>8 MS. YOUNG: Objection; form.</p> <p>9 A. No.</p> <p>10 Q. (BY MR. EWALT) If network effects are present</p> <p>11 in a market, does that mean that at least one firm in</p> <p>12 the market has monopoly power?</p> <p>13 MS. YOUNG: Objection; form.</p> <p>14 A. No.</p> <p>15 Q. (BY MR. EWALT) If network effects are present</p> <p>16 in a market, how can you identify which firms in that</p> <p>17 market have monopoly power?</p> <p>18 A. I would examine the market shares and also</p> <p>19 the technical characteristics of the network effects</p> <p>20 to make that determination.</p> <p>21 Q. Are there network effects in the market for</p> <p>22 publisher ad servers?</p> <p>23 MS. YOUNG: Objection; form.</p> <p>24 A. Do you mean in the sense that if more</p> <p>25 publishers use a particular ad server the other</p>
<p style="text-align: right;">Page 107</p> <p>1 increase prices above competitive levels without</p> <p>2 losing a significant number of customers has monopoly</p> <p>3 power?</p> <p>4 MS. YOUNG: Objection; form.</p> <p>5 A. That is one way of describing monopoly power,</p> <p>6 yes.</p> <p>7 Q. (BY MR. EWALT) Would you please turn to</p> <p>8 Paragraph 303 of your opening report.</p> <p>9 A. Yep.</p> <p>10 Q. Okay. And the third sentence of that</p> <p>11 paragraph reads: "Evidence of switching costs can be</p> <p>12 an indication that a firm possesses monopoly power in</p> <p>13 a given market."</p> <p>14 Do you see that?</p> <p>15 A. I see that sentence.</p> <p>16 Q. Can a firm with a 5 percent market share have</p> <p>17 monopoly power if there are high switching costs?</p> <p>18 MS. YOUNG: Objection; form.</p> <p>19 A. According to the definition of monopoly power</p> <p>20 I just gave you, yes.</p> <p>21 Q. (BY MR. EWALT) Okay. Would you please turn</p> <p>22 to Paragraph 304 of your opening report later on that</p> <p>23 page.</p> <p>24 A. Yes.</p> <p>25 Q. And that paragraph begins: "A firm that</p>	<p style="text-align: right;">Page 109</p> <p>1 publishers using that same ad server get a higher</p> <p>2 value?</p> <p>3 Q. (BY MR. EWALT) Yeah. Good -- good point.</p> <p>4 Let me ask about indirect network effects.</p> <p>5 A. Okay.</p> <p>6 Q. Are there indirect network effects in the</p> <p>7 market for publisher ad servers?</p> <p>8 MS. YOUNG: Objection; form.</p> <p>9 A. There is no particular reason why there would</p> <p>10 be indirect network effects in the market for</p> <p>11 publisher ad servers.</p> <p>12 Q. (BY MR. EWALT) Are there indirect network</p> <p>13 effects in the market for ad-buying tools for small</p> <p>14 advertisers?</p> <p>15 MS. YOUNG: Objection; form.</p> <p>16 A. There's no, you know, in principle reason why</p> <p>17 there would be indirect network effects in the market</p> <p>18 for provision of ad-buying tools for small</p> <p>19 advertisers.</p> <p>20 Q. (BY MR. EWALT) All right. Could you turn to</p> <p>21 the next page of your opening expert report.</p> <p>22 And I'll direct your attention to</p> <p>23 Paragraph 305, which begins: "Barriers to entry can</p> <p>24 reflect the existence of market power."</p> <p>25 Do you see that?</p>



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<p style="text-align: right;">Page 110</p> <p>1 A. Yes.</p> <p>2 Q. If barriers to entering a market are high,</p> <p>3 does that mean that every firm in that market has</p> <p>4 monopoly power?</p> <p>5 MS. YOUNG: Objection; form.</p> <p>6 A. Not necessarily.</p> <p>7 Q. (BY MR. EWALT) If barriers to entry in a</p> <p>8 market are high, does that mean that at least one firm</p> <p>9 in that market has monopoly power?</p> <p>10 A. Not necessarily.</p> <p>11 Q. If barriers to entering a market are high,</p> <p>12 how can you identify which firms, if any, in that</p> <p>13 market have monopoly power?</p> <p>14 A. I would combine that analysis with other</p> <p>15 factors that are present in the market.</p> <p>16 Q. What other factors would you consider?</p> <p>17 A. Do -- if -- well, if there's only -- if the</p> <p>18 barriers of entry are high and there's only one firm</p> <p>19 in the market, that -- there are no other factors</p> <p>20 required for that.</p> <p>21 If there is an entry of high and there's</p> <p>22 more than one firm in the market, one would have to</p> <p>23 look at the nature of the competition between those</p> <p>24 firms to establish whether one or more had market</p> <p>25 power.</p>	<p style="text-align: right;">Page 112</p> <p>1 MS. YOUNG: Objection; form.</p> <p>2 [REDACTED]</p> <p>3 [REDACTED]</p> <p>4 [REDACTED]</p> <p>5 Q. (BY MR. EWALT) Okay.</p> <p>6 (Marked Gans Exhibit No. 7.)</p> <p>7 Q. (BY MR. EWALT) Okay. I'm handing you a</p> <p>8 document that's been marked as Exhibit 7. This</p> <p>9 document has a slip sheet that says "Produced in</p> <p>10 Native" with Bates No. GOOG-NE-01663183.</p> <p>11 And I will represent to you that the document</p> <p>12 or the pages following the first page of the document</p> <p>13 are the printout of the native file that was produced</p> <p>14 with that Bates number.</p> <p>15 A. Okay.</p> <p>16 Q. I want to ask you -- before we dive into that</p> <p>17 document, ask you to please take a look at</p> <p>18 Footnote 381 in your opening report.</p> <p>19 A. Okay.</p> <p>20 Q. It's a long footnote.</p> <p>21 A. All right.</p> <p>22 Q. About halfway down in that footnote, about</p> <p>23 halfway through the line, there is a sentence that</p> <p>24 starts: "For 2010 to 2011 shares see..."</p> <p>25 And then a Bates number.</p>
<p style="text-align: right;">Page 111</p> <p>1 Q. Would you please turn to Page 117 of your</p> <p>2 opening report.</p> <p>3 MS. YOUNG: Page or paragraph?</p> <p>4 MR. EWALT: Page.</p> <p>5 A. Yes.</p> <p>6 Q. (BY MR. EWALT) Does Figure 9 summarize your</p> <p>7 analysis of DFP's share in the market for publisher ad</p> <p>8 servers?</p> <p>9 A. Yes, I believe it does.</p> <p>10 Q. And you report data for nine different years</p> <p>11 between 2006 and 2019.</p> <p>12 Is that fair?</p> <p>13 A. Correct.</p> <p>14 Q. And there are six different colors for the</p> <p>15 nine bars in Figure 9, right?</p> <p>16 A. Yes.</p> <p>17 Q. Each color represents a different way of</p> <p>18 measuring shares.</p> <p>19 Is that fair?</p> <p>20 MS. YOUNG: Objection; form.</p> <p>21 Go ahead.</p> <p>22 A. Yes.</p> <p>23 [REDACTED]</p> <p>24 [REDACTED]</p> <p>25 [REDACTED]</p>	<p style="text-align: right;">Page 113</p> <p>1 A. Yes.</p> <p>2 Q. Okay. Is exhibit --</p> <p>3 MS. YOUNG: Wait. Were you going to</p> <p>4 give him time to read the whole footnote? I think</p> <p>5 that was your --</p> <p>6 MR. EWALT: I don't think --</p> <p>7 MS. YOUNG: -- prior instruction, yeah.</p> <p>8 MR. EWALT: No, I don't think he needs</p> <p>9 to read it.</p> <p>10 Q. (BY MR. EWALT) If you feel like you do have</p> <p>11 to -- let me ask the question. If you feel like you</p> <p>12 need to read the whole footnote, then that's fine.</p> <p>13 A. Okay.</p> <p>14 Q. But is Exhibit 7 the document that you relied</p> <p>15 upon for the 2010 and 2011 shares reported in Figure 9</p> <p>16 of your opening report?</p> <p>17 MS. YOUNG: And you read the footnote if</p> <p>18 you feel like you need it to answer the question</p> <p>19 accurately.</p> <p>20 A. I believe it is.</p> <p>21 Q. (BY MR. EWALT) Could you please turn to</p> <p>22 Page No. 34 in Exhibit 7.</p> <p>23 A. Yes.</p> <p>24 Q. And Page 34 is one of the pages that you cite</p> <p>25 for the market shares in Figure 9, right?</p>

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1 A. Yes.  
2 [REDACTED]  
3 [REDACTED]  
4 [REDACTED]  
5 [REDACTED]  
6 [REDACTED]  
7 [REDACTED]  
8 [REDACTED]  
9 [REDACTED]  
10 [REDACTED]  
11 [REDACTED]  
12 [REDACTED]  
13 [REDACTED]  
14 [REDACTED]  
15 [REDACTED]  
16 [REDACTED]  
17 [REDACTED]  
18 [REDACTED]  
19 [REDACTED]  
20 [REDACTED]  
21 [REDACTED]  
22 [REDACTED]  
23 [REDACTED]  
24 [REDACTED]  
25 [REDACTED]

Page 115

1 [REDACTED]  
2 [REDACTED]  
3 [REDACTED]  
4 [REDACTED]  
5 [REDACTED]  
6 [REDACTED]  
7 [REDACTED]  
8 [REDACTED]  
9 [REDACTED]  
10 Q. Smaller publishers are less likely to use DFP  
11 than large publishers, aren't they?  
12 MS. YOUNG: Objection; form.  
13 A. Smaller publishers are less likely to use  
14 DFP? Well, there are small publishers who use DFP.  
15 Q. (BY MR. EWALT) That question, sir, is  
16 small -- do you know whether smaller publishers are  
17 less likely to use DFP than large publishers?  
18 MS. YOUNG: Objection; form.  
19 A. At the moment, I don't recall.  
20 Q. (BY MR. EWALT) Do you have any evidence of  
21 DFP's share of a U.S. market in 2010?  
22 A. The 2010 evidence that we have is -- is --  
23 is -- comes from this, so I don't -- I don't separate  
24 out the U.S. versus other countries that may be part  
25 of North America.

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1 [REDACTED]  
2 [REDACTED]  
3 [REDACTED]  
4 [REDACTED]  
5 [REDACTED]  
6 [REDACTED]  
7 [REDACTED]  
8 [REDACTED]  
9 [REDACTED]  
10 [REDACTED]  
11 [REDACTED]  
12 [REDACTED]  
13 [REDACTED]  
14 [REDACTED]  
15 [REDACTED]  
16 [REDACTED]  
17 [REDACTED]  
18 [REDACTED]  
19 [REDACTED]  
20 [REDACTED]  
21 [REDACTED]  
22 [REDACTED]  
23 [REDACTED]  
24 [REDACTED]  
25 [REDACTED]

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1 [REDACTED]  
2 [REDACTED]  
3 [REDACTED]  
4 [REDACTED]  
5 Q. (BY MR. EWALT) Well, the PowerPoint is dated  
6 May 2011, correct?  
7 A. Yes.  
8 Q. And at the bottom of the slide where it says  
9 "sources invite Q4 spend," you see that?  
10 MS. YOUNG: Objection; form.  
11 A. Yes.  
12 Q. (BY MR. EWALT) And there wasn't Q4 yet in  
13 2011, right?  
14 MS. YOUNG: Objection.  
15 A. Sorry.  
16 Q. (BY MR. EWALT) So at the time this document  
17 was created, we hadn't reached Q4 of 2011, right?  
18 A. We're assuming that that Q4 refers to the end  
19 of 2011. That, I'm not sure. Sometimes firms have  
20 different levels that they call Q4, Q1. Q4.  
21 That could well be.  
22 Q. Well, it also -- and, in fact, more likely  
23 refers to Q4 2010, correct?  
24 MS. YOUNG: Objection; form.  
25 A. Yes.

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[REDACTED]

12 Q. (BY MR. EWALT) An estimate of the market  
13 share in the future because it's a projection, right?  
14 A. Yes.  
15 Q. Other than this slide, have you seen any  
16 evidence of DFP's actual share of a U.S. market for  
17 publisher ad servers in 2011?  
18 A. I cannot --  
19 MS. YOUNG: Objection; form.  
20 You can -- you may answer.  
21 A. I cannot -- I cannot recall, but this --  
22 it -- it's -- that's -- this may be the only one.  
23 Q. (BY MR. EWALT) Does Google charge small per  
24 impression fees for the use of DFP?  
25 MS. YOUNG: Objection; form.

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1 A. I'm sorry, can you repeat that question?  
2 Q. (BY MR. EWALT) Yeah. Let's -- I'll withdraw  
3 it, and ask you to please turn to Page 167 of your  
4 opening report.  
5 A. Yes.  
6 Q. Okay. The last sentence of that paragraph  
7 reads: "By contrast, DFP is not only free for small  
8 publishers, but the cost to serve per impression for  
9 larger publishers is also small."  
10 Do you see that?  
11 A. I see that sentence, yes.  
12 Q. So my question is: Does Google charge small  
13 per impression fees for the use of DFP?  
14 A. Yes, you could characterize it as small.  
15 Q. And you've characterized it as small?  
16 A. Yes.  
17 Q. You understand that not all publishers pay  
18 for DFP, correct?  
19 A. I do.  
20 Q. DFP is free for small publishers?  
21 A. It's free for publishers who serve a small  
22 amount of ads.  
23 Q. Could you please turn to Page 126 of your  
24 opening report.  
25 MS. YOUNG: Page 126?

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1 MR. EWALT: Yes.  
2 Q. (BY MR. EWALT) Does Table 5 on Page 126 of  
3 your opening report contain your calculations of AdX's  
4 share in the ad exchange market for 2018 to 2021?  
5 MS. YOUNG: Objection; form.  
6 A. It does.  
7 [REDACTED]  
8 [REDACTED]  
9 [REDACTED]  
10 [REDACTED]  
11 [REDACTED]  
12 [REDACTED]  
13 Q. In your reports, do you provide an estimate  
14 of AdX's share of the ad exchange market for any time  
15 prior to January 2016?  
16 A. I don't believe so.  
17 [REDACTED]  
18 [REDACTED]  
19 [REDACTED]  
20 [REDACTED]  
21 [REDACTED]  
22 [REDACTED]  
23 [REDACTED]  
24 [REDACTED]  
25 [REDACTED]

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1 [REDACTED]  
2 Q. (BY MR. EWALT) When you calculated the market  
3 shares in Table 5 of your opening report, did you  
4 attribute to AdX impressions that are transacted  
5 through non-Google exchanges that participated in Open  
6 Bidding?  
7 A. Sorry. Can you ask that question again?  
8 Q. Absolutely.  
9 When you calculated the market shares in  
10 Table 5 of your opening report, did you attribute to  
11 AdX impressions transacted through non-Google  
12 exchanges that participated in Open Bidding?  
13 A. I do not believe that was -- that -- the --  
14 the purpose of the calculations was to work out the  
15 market share that could be attributed to AdX.  
16 Q. You would -- you would agree that it would be  
17 improper to attribute impressions transacted through  
18 exchanges that participated in Open Bidding to AdX?  
19 MS. YOUNG: Objection; form.  
20 A. Depending on the data available and other  
21 ways of making inferences of it, it would be -- it  
22 would be important to note what that data was.  
23 Q. (BY MR. EWALT) And if the data allowed you to  
24 isolate impressions that were occurring on ad  
25 exchanges through Open Bidding, would you agree that

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<p style="text-align: right;">Page 122</p> <p>1 it would be improper to attribute those impressions to</p> <p>2 AdX --</p> <p>3 MS. YOUNG: Objection.</p> <p>4 Q. (BY MR. EWALT) -- for purposes of calculating</p> <p>5 AdX's market share of an ad exchange market?</p> <p>6 MS. YOUNG: Objection; form.</p> <p>7 A. You would have to, whether there was any</p> <p>8 ambiguity, note what you -- how -- how you're arriving</p> <p>9 at the calculation.</p> <p>10 Q. (BY MR. EWALT) If the data allowed you to</p> <p>11 isolate impressions that were occurring on ad</p> <p>12 exchanges through Open Bidding without any ambiguity,</p> <p>13 would you agree that it would be improper to attribute</p> <p>14 those impressions to AdX?</p> <p>15 A. That --</p> <p>16 MS. YOUNG: Objection; form.</p> <p>17 Sorry. Go ahead.</p> <p>18 A. Yes, that would not sound like the usual</p> <p>19 course of analysis.</p> <p>20 Q. (BY MR. EWALT) When you calculated the market</p> <p>21 shares in Table 5, did you attribute to AdX</p> <p>22 impressions where the transaction type field took on a</p> <p>23 value of EBDA?</p> <p>24 MS. YOUNG: Objection; form.</p> <p>25 A. I cannot recall, but we can look at</p>	<p style="text-align: right;">Page 124</p> <p>1 Q. (BY MR. EWALT) And you understand that EBDA</p> <p>2 was an early name for Open Bidding?</p> <p>3 MS. YOUNG: Objection; form.</p> <p>4 A. That could be the case.</p> <p>5 Q. (BY MR. EWALT) Should impressions transacted</p> <p>6 through EBDA be counted in AdX's market share?</p> <p>7 MS. YOUNG: Objection; form.</p> <p>8 A. There's a discussion of this in my rebuttal</p> <p>9 report, I believe.</p> <p>10 Q. (BY MR. EWALT) Well, that's fine. And we'll</p> <p>11 have a chance to look at that in a moment.</p> <p>12 But I'm just asking you without reviewing your</p> <p>13 report --</p> <p>14 A. I can't recall.</p> <p>15 Q. -- should impressions transacted through EBDA</p> <p>16 be counted in AdX's market share?</p> <p>17 A. I can't recall whether they should because</p> <p>18 I -- there was some nuance in what EBDA was.</p> <p>19 Q. All right. Would you turn to Paragraph 605</p> <p>20 of your opening report, please.</p> <p>21 A. Yes.</p> <p>22 Q. Okay. And the first sentence of that</p> <p>23 paragraph reads: "By early 2018, Google responded to</p> <p>24 the competitive threat of Header Bidding circumventing</p> <p>25 GAM with its own version of Header Bidding implemented</p>
<p style="text-align: right;">Page 123</p> <p>1 discussions of where I did.</p> <p>2 Q. (BY MR. EWALT) Sure. So let's look at</p> <p>3 Footnote 428 to Table 5.</p> <p>4 A. Yes.</p> <p>5 Q. And about five lines -- or six lines down in</p> <p>6 Footnote 428, there's a sentence that reads: "The</p> <p>7 column transaction type is allowed to take values AdX</p> <p>8 no fill OA or EBDA."</p> <p>9 Do you see that?</p> <p>10 A. Yes.</p> <p>11 Q. When you calculated the market shares in</p> <p>12 Table 5, did you attribute to AdX impressions --</p> <p>13 sorry. Strike that.</p> <p>14 When you calculated the market shares in</p> <p>15 Table 5, did you attribute to AdX those impressions</p> <p>16 where transaction -- the transaction type field took</p> <p>17 on a value of EBDA?</p> <p>18 MS. YOUNG: Objection; form.</p> <p>19 A. Yes.</p> <p>20 Q. (BY MR. EWALT) Do you understand that EBDA</p> <p>21 stands for Exchange Bidding in Dynamic Allocation?</p> <p>22 A. I believe that --</p> <p>23 MS. YOUNG: Objection; form.</p> <p>24 Go ahead.</p> <p>25 A. I believe that's correct.</p>	<p style="text-align: right;">Page 125</p> <p>1 inside the ad server called Exchange Bidding in</p> <p>2 Dynamic Allocation, EBDA."</p> <p>3 Do you see that?</p> <p>4 A. Yes.</p> <p>5 Q. And you understand that EBDA evolved into</p> <p>6 Open Bidding, right?</p> <p>7 A. Yes.</p> <p>8 Q. So should impressions transacted through EBDA</p> <p>9 or Open Bidding exchanges be counted in AdX's market</p> <p>10 share?</p> <p>11 MS. YOUNG: Objection; form.</p> <p>12 A. It would depend on whether those impressions</p> <p>13 were transacted through AdX.</p> <p>14 Q. (BY MR. EWALT) By definition, aren't the</p> <p>15 transactions occurring through EBDA and Open Bidding</p> <p>16 not taking place on AdX?</p> <p>17 MS. YOUNG: Objection; form.</p> <p>18 A. I don't know if that's the case by</p> <p>19 definition.</p> <p>20 Q. (BY MR. EWALT) So you don't know one way or</p> <p>21 the other whether EBDA transactions are occurring on</p> <p>22 AdX?</p> <p>23 MS. YOUNG: Objection; form.</p> <p>24 Go ahead.</p> <p>25 A. As I said, the -- I can't recall at the</p>

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<p style="text-align: right;">Page 126</p> <p>1 moment but there was some discussion that -- due to</p> <p>2 Professor Baye's opinions that I elaborated on in my</p> <p>3 rebuttal report on this issue.</p> <p>4 Q. (BY MR. EWALT) Sure. So why don't we -- why</p> <p>5 don't we take a look at Page 192 of your rebuttal</p> <p>6 report.</p> <p>7 A. Page 192?</p> <p>8 Q. Yes.</p> <p>9 A. Yes.</p> <p>10 Q. Okay. So you -- you seem like you wanted to</p> <p>11 review this to refresh your memory. So please take a</p> <p>12 moment to do that.</p> <p>13 A. Okay. Thank you.</p> <p>14 Yes.</p> <p>15 Q. Okay. Are the market shares that you</p> <p>16 reported in Figure 5 of your opening report mistaken?</p> <p>17 MS. YOUNG: Objection; form.</p> <p>18 A. Are they a mistake?</p> <p>19 Q. (BY MR. EWALT) Yeah.</p> <p>20 A. No.</p> <p>21 Q. Okay. Should impressions transacted through</p> <p>22 Open Bidding exchanges be counted in AdX's market</p> <p>23 share?</p> <p>24 MS. YOUNG: Objection; form.</p> <p>25 A. Transactions that are not AdX exchanges</p>	<p style="text-align: right;">Page 128</p> <p>1 A. Yes.</p> <p>2 Q. My question is about if you -- that</p> <p>3 understanding is mistaken and if the transactions</p> <p>4 labeled EBDA did not actually occur in AdX, would the</p> <p>5 market shares that you reported in Table 5 of your</p> <p>6 opening report be overstated?</p> <p>7 MS. YOUNG: Objection; form.</p> <p>8 A. The market shares, to the extent that they</p> <p>9 included in the -- the calculation included things in</p> <p>10 the numerator that were from the denominator that were</p> <p>11 not AdX would overstate it.</p> <p>12 Q. (BY MR. EWALT) So I think the answer to my</p> <p>13 question is yes, but I want to just make sure.</p> <p>14 Yes or no?</p> <p>15 A. Well, I -- I -- for the purposes of providing</p> <p>16 an accurate answer to what is, in my mind, a</p> <p>17 hypothetical, I'm answering it the way I did.</p> <p>18 Q. Well, with respect, I don't think you</p> <p>19 answered the question that I asked. So I want to ask</p> <p>20 it again.</p> <p>21 MS. YOUNG: I'll move to strike</p> <p>22 everything before the question because that was not a</p> <p>23 pending question.</p> <p>24 Q. (BY MR. EWALT) If the transactions labeled in</p> <p>25 EBDA did not actually occur in AdX, would the market</p>
<p style="text-align: right;">Page 127</p> <p>1 should not be counted as AdX exchanges.</p> <p>2 Q. (BY MR. EWALT) And Open Bidding impressions</p> <p>3 are not transacted on AdX exchange, correct?</p> <p>4 MS. YOUNG: Objection; form.</p> <p>5 A. That's -- I do not know that with respect to</p> <p>6 the variable EBDA. I don't -- I recall looking at</p> <p>7 documentation to do with that during the write --</p> <p>8 writing of my reports, and that is not my</p> <p>9 interpretation of that.</p> <p>10 Q. Do you know whether EBDA transactions</p> <p>11 occurred on AdX?</p> <p>12 A. My understanding is the ones labeled EBDA in</p> <p>13 that data set occurred on AdX.</p> <p>14 Q. And if the transactions that were labeled</p> <p>15 EBDA in that data set did not occur on AdX, would the</p> <p>16 market shares reported in Table 5 of your opening</p> <p>17 report be wrong?</p> <p>18 MS. YOUNG: Objection; form.</p> <p>19 A. The market shares that I calculated were a --</p> <p>20 were -- from my understanding of the documentation</p> <p>21 market shares that were of transactions that were</p> <p>22 served through AdX.</p> <p>23 Q. (BY MR. EWALT) I understand that was your</p> <p>24 understanding. Now I'm asking you a different</p> <p>25 question.</p>	<p style="text-align: right;">Page 129</p> <p>1 shares that you reported in Table 5 of your opening</p> <p>2 report be overstated?</p> <p>3 MS. YOUNG: Objection; form.</p> <p>4 A. So long as that was a -- a calculation that</p> <p>5 is consistent with the way those transactions were</p> <p>6 treated in the denominator, that is possible.</p> <p>7 MS. YOUNG: Counsel, we've been for</p> <p>8 going over an hour and we haven't taken a lunch break.</p> <p>9 So when you reach a good stopping point I think for --</p> <p>10 MR. EWALT: Okay. We're almost there.</p> <p>11 MS. YOUNG: -- our reporter and</p> <p>12 everyone's sake.</p> <p>13 THE WITNESS: What time is it?</p> <p>14 Does anyone know the time?</p> <p>15 MR. EWALT: It's 12:40.</p> <p>16 THE WITNESS: Okay. In the current time</p> <p>17 zone it's 12:40? I don't know what --</p> <p>18 MR. EWALT: That's what this says.</p> <p>19 THE WITNESS: Okay. Cool.</p> <p>20 Q. (BY MR. EWALT) Okay. Let's look at your</p> <p>21 rebuttal report, Page 192, Figure 24.</p> <p>22 That figure reproduces a table that Professor</p> <p>23 Baye included in his report, correct?</p> <p>24 A. Yes.</p> <p>25 Q. And Row B of that table removes from the</p>



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<p>1 numerator of your Table 5 the transactions that were</p> <p>2 associated with EBDA; is that correct?</p> <p>3 A. Yes.</p> <p>4 MS. YOUNG: Objection; form.</p> <p>5 Please let me object first. Go ahead.</p> <p>6 Q. (BY MR. EWALT) And do you have any reason to</p> <p>7 doubt that the figures reported in Row B for AdX's</p> <p>8 market share are correctly calculated if EBDA</p> <p>9 transactions did not occur on AdX?</p> <p>10 MS. YOUNG: Objection; form.</p> <p>11 A. I -- I believe those calculations are</p> <p>12 accurate for that adjustment.</p> <p>13 MR. EWALT: Seems like a good time for</p> <p>14 lunch.</p> <p>15 Let's go off the record.</p> <p>16 THE WITNESS: Okay.</p> <p>17 THE VIDEOGRAPHER: This is now the end</p> <p>18 of Video 3 of Joshua Gans. Off the record. The time</p> <p>19 is 12:41.</p> <p>20 (Break from 12:41 p.m. to 1:36 p.m.)</p> <p>21 THE VIDEOGRAPHER: We're now on the</p> <p>22 record. Video 4 of Joshua Gans. The time is</p> <p>23 approximately 1:36.</p> <p>24 MS. YOUNG: Before Mr. Ewalt continues</p> <p>25 questioning, we're putting on the record that counsel</p>	<p>1 Professor Gans, would you please return to</p> <p>2 what we were talking about before the break and ask --</p> <p>3 direct your attention to Page 192 of your rebuttal</p> <p>4 report.</p> <p>5 A. Okay. Yes.</p> <p>6 [REDACTED]</p> <p>7 [REDACTED]</p> <p>8 [REDACTED]</p> <p>9 [REDACTED]</p> <p>10 [REDACTED]</p> <p>11 [REDACTED]</p> <p>12 [REDACTED]</p> <p>13 Q. Great. Let's -- can you keep open to that</p> <p>14 page, please, but then also open your opening report</p> <p>15 to Page 126.</p> <p>16 MS. YOUNG: Did you say Page 126?</p> <p>17 MR. EWALT: Oh, yes. I'm sorry.</p> <p>18 Page 126.</p> <p>19 A. Sorry.</p> <p>20 Q. (BY MR. EWALT) Page 126?</p> <p>21 A. Page 126, yes.</p> <p>22 Q. All right. Do the calculations underlying</p> <p>23 Table 5 in your opening report account for the fact</p> <p>24 that impressions transacted by AdX and other exchanges</p> <p>25 may be served outside of DFP?</p>
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<p>1 for the states provided counsel with Google with</p> <p>2 language that would be inserted in the missing</p> <p>3 footnote of Figure 7 of Professor Gans' rebuttal</p> <p>4 report.</p> <p>5 Plaintiff States has told Google counsel</p> <p>6 that we will follow up with an official signed errata</p> <p>7 noting that addition to Professor Gans' rebuttal</p> <p>8 report. And counsel has the opportunity to review and</p> <p>9 ask Professor Gans any questions about that added</p> <p>10 footnote at this deposition.</p> <p>11 MR. EWALT: Thank you, Ms. Young.</p> <p>12 Q. (BY MR. EWALT) And welcome back, Professor</p> <p>13 Gans.</p> <p>14 I think you know my first question,</p> <p>15 I think I know your first answer.</p> <p>16 A. Oh, right.</p> <p>17 Q. I'll ask the question. During the lunch</p> <p>18 break did you discuss the substance of this case with</p> <p>19 counsel?</p> <p>20 MS. YOUNG: I'm going to instruct the</p> <p>21 witness, per the expert stipulation in this case, not</p> <p>22 to disclose the content of communications he, as a</p> <p>23 testifying expert, had with counsel.</p> <p>24 Q. (BY MR. EWALT) So based on that instruction,</p> <p>25 I'll move on to my next question.</p>	<p>1 MS. YOUNG: Objection; form.</p> <p>2 A. No. Well, they -- well, let me -- let me</p> <p>3 clarify.</p> <p>4 It was based on transactions through</p> <p>5 DFP, as I clearly state, although we tested -- we</p> <p>6 examined other data that gave us confidence there was</p> <p>7 no significant bias in doing -- using that approach.</p> <p>8 Q. (BY MR. EWALT) Did you discuss in your</p> <p>9 reports the other data that you examined?</p> <p>10 A. The other -- the -- the other data examined,</p> <p>11 we -- we do -- sorry, let me -- let me try and remind</p> <p>12 myself -- that was discussed somewhere in these</p> <p>13 reports.</p> <p>14 Q. All right. If Table 5 had accounted for the</p> <p>15 fact that some impressions are served outside of DFP,</p> <p>16 would AdX's share of the ad exchange market be lower</p> <p>17 than what's reported in Table 5?</p> <p>18 A. No.</p> <p>19 MS. YOUNG: Objection; form.</p> <p>20 Go ahead.</p> <p>21 A. That was our assessment that it would not be.</p> <p>22 Q. (BY MR. EWALT) All right. Please turn in</p> <p>23 your rebuttal report to Page 92.</p> <p>24 A. 92?</p> <p>25 Q. Yes.</p>

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<p>1 A. Yes.</p> <p>2 Q. Does Figure 10 in your rebuttal report report</p> <p>3 market shares for AdX and other exchanges for the</p> <p>4 period April 2019 to May 2020?</p> <p>5 A. All right. Let me just examine.</p> <p>6 MS. YOUNG: Objection; form.</p> <p>7 A. Can you ask that question again so I just</p> <p>8 have it?</p> <p>9 Q. (BY MR. EWALT) Does Figure 10 in your</p> <p>10 rebuttal report report market shares in the ad</p> <p>11 exchange market and for AdX other exchanges for the</p> <p>12 period April 2019 to May 2020?</p> <p>13 MS. YOUNG: Same objection.</p> <p>14 A. Yes, it does, but using Professor Baye's</p> <p>15 panel.</p> <p>16 [REDACTED]</p> <p>17 [REDACTED]</p> <p>18 [REDACTED]</p> <p>19 [REDACTED]</p> <p>20 [REDACTED]</p> <p>21 Q. Did the data that you used in Figure 10</p> <p>22 include information about impressions transacted by</p> <p>23 any ad exchanges other than the eight ad exchanges</p> <p>24 identified in Figure 10?</p> <p>25 A. I can't -- I can't recall precisely. I --</p>	<p>1 you didn't do anything to account for the existence of</p> <p>2 ad exchanges other than the eight that are</p> <p>3 specifically mentioned in Figure 10?</p> <p>4 MS. YOUNG: Objection; form.</p> <p>5 A. I -- I think in our production materials, we</p> <p>6 say what we -- what we did, and that's what we did.</p> <p>7 Q. (BY MR. EWALT) Well, then, I'm asking you</p> <p>8 because you -- I have to be honest. Sometimes your</p> <p>9 production materials are not as clear as a lawyer like</p> <p>10 me can understand, so I just want to ask the question</p> <p>11 about whether when you put together Figure 10 you did</p> <p>12 anything to account for the existence of ad exchanges</p> <p>13 other than the eight that are specifically mentioned?</p> <p>14 MS. YOUNG: Objection; form.</p> <p>15 A. When we were using the data, we considered</p> <p>16 what we understood -- as I said, the data was coming</p> <p>17 from Professor Baye's panel, what that data was in</p> <p>18 order to represent, we thought, a conservative</p> <p>19 representation of the various market shares in</p> <p>20 Figure 10.</p> <p>21 Q. (BY MR. EWALT) So do you think that the way</p> <p>22 that Professor Baye describes Figure 10 in his</p> <p>23 surrebuttal report is correct?</p> <p>24 A. Let's -- can -- can I have his surrebuttal</p> <p>25 report again -- well, I don't think we've got it yet.</p>
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<p>1 I -- I don't believe it included other ones.</p> <p>2 Q. And were there more than eight ad exchanges</p> <p>3 operating in the United States during the period</p> <p>4 April 2019 to May 2020?</p> <p>5 MS. YOUNG: Objection; form.</p> <p>6 A. Yes, there may have been.</p> <p>7 Q. (BY MR. EWALT) In Figure 10, did you do</p> <p>8 anything to account for the existence of the ad</p> <p>9 exchanges other than the eight that are specifically</p> <p>10 mentioned?</p> <p>11 A. The -- I'm trying to recall from the data</p> <p>12 set, although we could, I guess, call that up, is that</p> <p>13 there was a category of unknown, and it was not clear</p> <p>14 whether the unknown were other exchanges or, in fact,</p> <p>15 could be the exchanges that we had clear information</p> <p>16 on.</p> <p>17 Q. But when you were -- when you were preparing</p> <p>18 Figure 10, is it fair to say that you did not include</p> <p>19 any of the information about the unknown data in</p> <p>20 Figure 10?</p> <p>21 MS. YOUNG: Objection; form.</p> <p>22 A. Yes. We didn't include it even though there</p> <p>23 was a possibility that it could increase the AdX</p> <p>24 market share.</p> <p>25 Q. (BY MR. EWALT) All right. So in Figure 10,</p>	<p>1 Q. Yep. We'll get there in a moment.</p> <p>2 A. Okay. But I am aware that he discussed this</p> <p>3 issue in his surrebuttal report.</p> <p>4 [REDACTED]</p> <p>5 [REDACTED]</p> <p>6 [REDACTED]</p> <p>7 [REDACTED]</p> <p>8 [REDACTED]</p> <p>9 [REDACTED]</p> <p>10 [REDACTED]</p> <p>11 [REDACTED]</p> <p>12 [REDACTED]</p> <p>13 [REDACTED]</p> <p>14 [REDACTED]</p> <p>15 [REDACTED]</p> <p>16 [REDACTED]</p> <p>17 [REDACTED]</p> <p>18 [REDACTED]</p> <p>19 [REDACTED]</p> <p>20 [REDACTED]</p> <p>21 [REDACTED]</p> <p>22 [REDACTED]</p> <p>23 [REDACTED]</p> <p>24 [REDACTED]</p> <p>25 [REDACTED]</p>



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[REDACTED]

11 Q. (BY MR. EWALT) Now it's time to talk about

12 Professor Baye -- Professor Baye's surrebuttal report.

13 Handing you -- that report has been marked

14 Exhibit 8.

15 A. Okay.

16 (Marked Gans Exhibit No. 8.)

17 A. Surrebuttal is one of those fancy Latin names

18 that you lawyers like, right?

19 Q. (BY MR. EWALT) I'm not sure if it's Latin.

20 A. It isn't?

21 Q. Maybe, "sur" -- I mean, I guess the "sur"

22 part is. Rebuttal -- I know "rebuttal" is not.

23 A. Actually, I don't know Latin, so I was just

24 guessing.

25 Q. Yeah.

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1 All right. So you have Professor Baye's

2 surrebuttal report in front of you?

3 A. Yes.

4 Q. Have you reviewed Professor Baye's

5 surrebuttal report before?

6 A. I have.

7 Q. When was the first time you reviewed it?

8 A. On October 5, 2024.

9 Q. How long have you spent reviewing

10 Professor Baye's surrebuttal report?

11 A. About two or three hours.

12 Q. Did you review any of the backup materials

13 for the Baye surrebuttal report?

14 A. No, I didn't have a chance to do that.

15 Q. Would you please turn to Paragraph 5 of the

16 Baye surrebuttal report?

17 A. Yes.

18 [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Page 140

1 [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

9 Q. (BY MR. EWALT) Why not?

10 A. Well, if you turn over to Page 4 of the

11 surrebuttal report, you'll look at Figure 1, which is

12 a less colorful and less -- less colorful version of

13 Figure 10 of mine, but it includes the other

14 characteristic there, as I mentioned before, because

15 we could not determine from the documentation were

16 there other -- were other ad exchanges or were just

17 things that were failed to be classified for any of

18 the existing exchanges that we had delineated data on.

19 That, we did not include other in our

20 calculation of the market shares at all. Professor

21 Baye includes other in its entirety in the denominator

22 of all the market shares there.

23 Q. Is it possible that Professor Baye's

24 interpretation of the data characterized as "other" is

25 correct?

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1 MS. YOUNG: Objection; form.

2 A. As I -- as I -- and I don't think

3 Professor Baye knows what constitutes "other." It is

4 possible that he could be correct.

5 Q. (BY MR. EWALT) Could you please turn to

6 Paragraph 25 of the Baye surrebuttal report.

7 Now, halfway through that paragraph, there's a

8 sentence that reads "Moreover, the numbers that

9 Professor Gans presents in his rebuttal report,

10 Tables 4 and 11 are in some instances miscalculated by

11 an order of magnitude owing to error in his computer

12 code."

13 Do you see that?

14 A. I see that, yes.

15 MS. YOUNG: Sorry. Can you point me --

16 this is Paragraph 25 -- oh, halfway through the

17 paragraph.

18 THE WITNESS: Tables 4 and 11.

19 MS. YOUNG: "Moreover."

20 (Speaking simultaneously.)

21 MS. YOUNG: Sorry to interrupt.

22 Q. (BY MR. EWALT) Okay. And then after that

23 sentence the paragraph continues: "Among other

24 errors, instead of calculating the average monthly fee

25 per customer, Professor Gans computes the total

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<p>1 revenue for each fee type over a nine-year period and</p> <p>2 divides this by the number of publishers who are</p> <p>3 associated with the fee type of at any point in that</p> <p>4 period."</p> <p>5 Do you see that?</p> <p>6 A. Yes.</p> <p>7 Q. Do you agree that description of your</p> <p>8 computer code?</p> <p>9 MS. YOUNG: Objection; form.</p> <p>10 A. I need to remind myself. I'm trying to just</p> <p>11 remind myself of -- he's calling errors what that he's</p> <p>12 calling errors in the computer -- I'm trying to remind</p> <p>13 myself since we switched ad servers, right?</p> <p>14 Q. (BY MR. EWALT) So you -- let me direct you to</p> <p>15 your rebuttal report, Page 47.</p> <p>16 A. Okay.</p> <p>17 Q. It has Table 11.</p> <p>18 A. Yes.</p> <p>19 Q. And Page 213 has -- I'm sorry -- Page 47 has</p> <p>20 Table 4 --</p> <p>21 A. Uh-huh.</p> <p>22 Q. -- and Page 213 has Table 11.</p> <p>23 A. Okay.</p> <p>24 Q. And I think they're the same.</p> <p>25 A. Yes. Let me just...</p>	<p>1 types, when I was instructing and then reviewing the</p> <p>2 outputs, these were the sorts of questions we were</p> <p>3 paying attention to, or I was paying attention to.</p> <p>4 Q. Do you ever make a mistake?</p> <p>5 MS. YOUNG: Objection; form.</p> <p>6 A. In my life?</p> <p>7 Q. (BY MR. EWALT) Yeah.</p> <p>8 A. I've -- I've made errors in my life.</p> <p>9 Q. Okay. Would you -- you can put that aside.</p> <p>10 Can you please turn to Page 135 of your</p> <p>11 opening report.</p> <p>12 Does the final row of Table 7 on</p> <p>13 Page 135 of your opening report -- does that row</p> <p>14 report your estimate of Google Ads' share of the</p> <p>15 market for ad-buying tools for small advertisers from</p> <p>16 2018 to 2021?</p> <p>17 MS. YOUNG: Objection; form.</p> <p>18 A. Yes.</p> <p>19 Q. (BY MR. EWALT) Did you calculate Google Ads'</p> <p>20 share of the market for ad-buying tools for small</p> <p>21 advertisers for any time before 2018?</p> <p>22 A. I don't recall. I don't believe so.</p> <p>23 [REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>
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<p>1 Okay.</p> <p>2 Q. Let me ask the question.</p> <p>3 A. I have -- I have not -- I have not reviewed</p> <p>4 this particular claim but I -- I don't believe it's</p> <p>5 accurate.</p> <p>6 Q. Okay. Why do you think it's inaccurate?</p> <p>7 A. Because the calculation of these fees --</p> <p>8 well, I don't know I don't know why he is saying that</p> <p>9 we did what he claims to. I would have to -- I would</p> <p>10 have to -- I would have to review his code and</p> <p>11 review -- and compare it with our code to -- to be</p> <p>12 able to comment on that.</p> <p>13 Q. Okay. So it's fair to say, then, that as you</p> <p>14 sit here today, you don't have a view one way or the</p> <p>15 other as to whether Baye -- Professor Baye is correct</p> <p>16 in what he states in Paragraph 25 of his surrebuttal</p> <p>17 report?</p> <p>18 MS. YOUNG: Objection; form.</p> <p>19 A. Oh -- oh, I do have a view. I believe he is</p> <p>20 likely incorrect, but I haven't had a chance to, since</p> <p>21 his surrebuttal report and he raises it, check that</p> <p>22 claim.</p> <p>23 Q. (BY MR. EWALT) Okay. So without checking his</p> <p>24 claim, why do you think he's likely wrong?</p> <p>25 A. Because when we were calculating these fee</p>	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>11 Q. (BY MR. EWALT) All right. Let's turn to your</p> <p>12 rebuttal report, Page 9.</p> <p>13 A. Yes.</p> <p>14 Q. Does Table 1 provide a summary of your</p> <p>15 opinions in this case?</p> <p>16 A. Yes.</p> <p>17 Q. Does the column titled "Relevant Market"</p> <p>18 describe each of the markets that you've defined to be</p> <p>19 relevant markets in this case?</p> <p>20 A. Yes.</p> <p>21 Q. Does the column titled "Conduct Affecting the</p> <p>22 Relevant Market" describe the only conduct that you're</p> <p>23 opining affected each of the relevant markets that</p> <p>24 you've defined?</p> <p>25 MS. YOUNG: Objection; form.</p>

37 (Pages 142 - 145)

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<p>1 A. Yes.</p> <p>2 Q. (BY MR. EWALT) In either of your reports did</p> <p>3 you express an opinion about whether any conduct,</p> <p>4 other than the alleged tying, affected the publisher</p> <p>5 ad server market?</p> <p>6 A. The -- sorry, can you repeat that question</p> <p>7 again.</p> <p>8 Q. In either of your reports did you express an</p> <p>9 opinion about whether any conduct, other than the</p> <p>10 alleged tying, affected the publisher ad server</p> <p>11 market?</p> <p>12 MS. YOUNG: Objection; form.</p> <p>13 A. Some of the conduct did affect those, but the</p> <p>14 market for -- that was relevant for competitive harm</p> <p>15 was only with tying that it was affecting</p> <p>16 competitive -- impacting on competition in that</p> <p>17 market.</p> <p>18 Q. (BY MR. EWALT) I see.</p> <p>19 In either of your reports did you express an</p> <p>20 opinion about whether any conduct, other than the</p> <p>21 alleged tying, harmed competition in the publisher ad</p> <p>22 server market?</p> <p>23 MS. YOUNG: Objection; form.</p> <p>24 A. I did not.</p> <p>25 Q. (BY MR. EWALT) In either of your reports did</p>	<p>1 Bernanke, and DRS?</p> <p>2 A. I don't --</p> <p>3 MS. YOUNG: Objection; form.</p> <p>4 A. I didn't.</p> <p>5 Q. (BY MR. EWALT) In either of your reports did</p> <p>6 you express an opinion that RPO harmed competition in</p> <p>7 any market?</p> <p>8 MS. YOUNG: Objection; form.</p> <p>9 A. I did not.</p> <p>10 Q. (BY MR. EWALT) In either of your reports did</p> <p>11 you express an opinion that exchange bidding harmed</p> <p>12 competition in any market?</p> <p>13 MS. YOUNG: Firm.</p> <p>14 A. That exchange bidding itself, I did not.</p> <p>15 Q. (BY MR. EWALT) In either of your reports did</p> <p>16 you express an opinion that Open Bidding harmed</p> <p>17 competition in any market?</p> <p>18 MS. YOUNG: Objection; form.</p> <p>19 A. Open Bidding itself, I did not.</p> <p>20 [REDACTED]</p> <p>21 [REDACTED]</p> <p>22 [REDACTED]</p> <p>23 [REDACTED]</p> <p>24 [REDACTED]</p> <p>25 Q. In either of your reports did you express an</p>
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<p>1 you express -- did you express an opinion about</p> <p>2 whether any conduct, other than Bernanke and Global</p> <p>3 Bernanke harmed competition in the market for</p> <p>4 ad-buying tools for small advertisers?</p> <p>5 A. I did not.</p> <p>6 MS. YOUNG: Objection; form.</p> <p>7 THE WITNESS: Oh, sorry.</p> <p>8 MS. YOUNG: Go ahead.</p> <p>9 A. I did not.</p> <p>10 Q. (BY MR. EWALT) In either of your reports did</p> <p>11 you express an opinion about whether any conduct,</p> <p>12 other than UPR, harmed competition in the market for</p> <p>13 ad-buying tools for large advertisers?</p> <p>14 MS. YOUNG: Objection; form.</p> <p>15 A. I don't believe I did.</p> <p>16 Q. (BY MR. EWALT) In either of your reports did</p> <p>17 you express an opinion about whether any conduct</p> <p>18 affected -- strike that.</p> <p>19 In either of your reports did you -- did --</p> <p>20 strike it again.</p> <p>21 In either of your reports did you express an</p> <p>22 opinion about whether competition in the ad exchange</p> <p>23 market was harmed by conduct, other than UPR, Dynamic</p> <p>24 Allocation, Enhanced Dynamic Allocation, line item</p> <p>25 limitations, data field redactions, Bernanke, Global</p>	<p>1 opinion that Project Poirot harmed competition in any</p> <p>2 market?</p> <p>3 MS. YOUNG: Objection; form.</p> <p>4 A. I did not express an opinion.</p> <p>5 Q. (BY MR. EWALT) In either of your reports did</p> <p>6 you express your opinion in your report that</p> <p>7 Project Elmo harmed competition in any market?</p> <p>8 MS. YOUNG: Objection; form.</p> <p>9 A. Project Elmo. Right. I did not.</p> <p>10 Q. (BY MR. EWALT) In either of your reports did</p> <p>11 you express an opinion that Project Bell harmed</p> <p>12 competition in any market?</p> <p>13 MS. YOUNG: Objection; form.</p> <p>14 A. I'm forgetting whether Project Bell was also</p> <p>15 a name for something else, so I can't recall.</p> <p>16 Q. (BY MR. EWALT) Okay. In either of your</p> <p>17 reports did you express an opinion that Privacy</p> <p>18 Sandbox harmed competition in any market?</p> <p>19 A. I did not separately evaluate Privacy</p> <p>20 Sandbox.</p> <p>21 Q. Do you see that the middle column of Table 1</p> <p>22 in your rebuttal report is titled "Google's Estimated</p> <p>23 Market Share Across the Relevant Time Period"?</p> <p>24 A. Yes.</p> <p>25 Q. Why do you have "NA" in the row for large</p>

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1 advertiser buying tools market, in that column?

2 A. Because I didn't attempt to calculation of

3 its market share or try to estimate it through other

4 means.

5 [REDACTED]

6 [REDACTED]

7 [REDACTED]

8 [REDACTED]

9 [REDACTED]

10 [REDACTED]

11 [REDACTED]

12 [REDACTED]

13 [REDACTED]

14 [REDACTED]

15 [REDACTED]

16 [REDACTED]

17 [REDACTED]

18 [REDACTED]

19 [REDACTED]

20 [REDACTED]

21 [REDACTED]

22 [REDACTED]

23 [REDACTED]

24 [REDACTED]

25 [REDACTED]

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1 [REDACTED]

2 [REDACTED]

3 [REDACTED]

4 [REDACTED]

5 [REDACTED]

6 [REDACTED]

7 Q. Yeah. Yeah. Okay.

8 So let's pick Dynamic Allocation, for

9 example.

10 A. Yes.

11 Q. So you're aware that Dynamic Allocation began

12 in 2007?

13 A. Yes.

14 [REDACTED]

15 [REDACTED]

16 [REDACTED]

17 [REDACTED]

18 Q. Do you realize that there wasn't an ad

19 exchange market in 2007?

20 A. I'm sorry. Dynamic Allocation -- sorry.

21 You'll -- I -- I didn't listen to your

22 question closely enough.

23 Q. Okay. Well, you know, I'm just trying to

24 understand what your position is here.

25 A. Sorry, because I -- the reason why I just

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1 didn't -- I -- I -- I didn't listen to your question.

2 I -- I led Google's market share and I didn't think

3 about the dates when I answered your question.

4 Q. Okay. Well, but even putting aside whether

5 it was, you know, Google or DoubleClick that owned the

6 exchange --

7 A. Yes.

8 [REDACTED]

9 [REDACTED]

10 [REDACTED]

11 [REDACTED]

12 [REDACTED]

13 [REDACTED]

14 [REDACTED]

15 [REDACTED]

16 [REDACTED]

17 [REDACTED]

18 [REDACTED]

19 [REDACTED]

20 [REDACTED]

21 [REDACTED]

22 Q. (BY MR. EWALT) Okay. And so you understand

23 that Google had an ad exchange in 2008?

24 MS. YOUNG: Objection; form.

25 A. Google had acquired DoubleClick and then had

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1 an ad exchange. And when it implemented -- when it

2 exchanged in those implementations, that's when the

3 conduct began.

4 Q. (BY MR. EWALT) In 2008?

5 A. I'd have to --

6 MS. YOUNG: Objection; form.

7 A. -- report to my -- report to remember the

8 exact dates of these things.

9 Q. (BY MR. EWALT) Okay. Switch gears again

10 here.

11 Did you conclude that some of Google's conduct

12 was anticompetitive?

13 A. Some of -- the -- of the conduct that I

14 analyzed, I concluded that all of it was

15 anticompetitive.

16 Q. But you didn't analyze all conduct that

17 Google engaged in, right?

18 A. Oh, no, that's correct.

19 Q. Okay. How did you distinguish -- how do you

20 distinguish anticompetitive conduct from conduct that

21 is not anticompetitive?

22 A. Well, I didn't reach a conclusion for

23 Google's conduct other than the conduct I analyzed.

24 Q. Fair.

25 But I'm trying to get a sense of like

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<p style="text-align: right;">Page 154</p> <p>1 how do you -- how do go about doing this exercise?</p> <p>2 A. Yes.</p> <p>3 Q. So let me ask again.</p> <p>4 How do you distinguish anticompetitive</p> <p>5 conduct from conduct that is not anticompetitive?</p> <p>6 A. So once you've identified the conduct at</p> <p>7 hand, you perform an analysis comparing the outcomes</p> <p>8 that arose in the market with that conduct because</p> <p>9 you're analyzing conduct that actually took place.</p> <p>10 And compare it with what you can</p> <p>11 understand from an economic perspective using the --</p> <p>12 sum total and tools of that -- of the discipline, what</p> <p>13 would have likely happened had that conduct not taken</p> <p>14 place. That's the first thing you do.</p> <p>15 When you're doing that, you then analyze</p> <p>16 whether the conclusions between what we'll call the</p> <p>17 factual and the counterfactual, without the conduct,</p> <p>18 are being driven by the firm in question having market</p> <p>19 power in a particular market that allowed them to be</p> <p>20 able to do that conduct and other conditions that gave</p> <p>21 them the incentive to do that conduct.</p> <p>22 And that incentive was to give rise to</p> <p>23 anticompetitive effects at the time of that conduct or</p> <p>24 ultimately manifesting themselves in the future.</p> <p>25 Q. Okay. So do I have it right that starting</p>	<p style="text-align: right;">Page 156</p> <p>1 A. Those outcomes, depending on the context, can</p> <p>2 be prices, quantities, investment, innovation, entry,</p> <p>3 exit, growth.</p> <p>4 Q. Okay. Does a firm offering high quality</p> <p>5 products harm competitors who can't match the firm's</p> <p>6 high quality?</p> <p>7 MS. YOUNG: Objection; form.</p> <p>8 A. If the firm develops a high quality product,</p> <p>9 that the competitors don't develop, that can harm --</p> <p>10 that makes it more difficult for those competitors.</p> <p>11 Q. (BY MR. EWALT) Is it anticompetitive for a</p> <p>12 monopolist to offer high quality products?</p> <p>13 MS. YOUNG: Objection; form.</p> <p>14 A. Not necessarily.</p> <p>15 Q. (BY MR. EWALT) Does a firm offering low</p> <p>16 prices harm competitors who have to cut their own</p> <p>17 prices to compete?</p> <p>18 MS. YOUNG: Objection; form.</p> <p>19 A. To -- if we call harm, make it more difficult</p> <p>20 for those competitors to earn a profit, yes.</p> <p>21 Q. (BY MR. EWALT) Is it anticompetitive for a</p> <p>22 monopolist to offer prices that are low but still</p> <p>23 above its costs?</p> <p>24 MS. YOUNG: Objection; form.</p> <p>25 A. Generally speaking not.</p>
<p style="text-align: right;">Page 155</p> <p>1 point for distinguishing anticompetitive conduct from</p> <p>2 conduct that's not anticompetitive is to define a</p> <p>3 factual -- factual world and a counterfactual world?</p> <p>4 A. Is to -- so to -- is not -- to define as to</p> <p>5 analyze and using both combination of economic</p> <p>6 approaches and evidence available to understand what</p> <p>7 the differences in market outcomes would be in the</p> <p>8 factual versus the counterfactual with and without</p> <p>9 that conduct.</p> <p>10 Q. So as a first step you need to identify what</p> <p>11 the counterfactual world is?</p> <p>12 MS. YOUNG: Objection; form.</p> <p>13 A. I don't know if it's a -- if it's a first</p> <p>14 step. It's a -- a -- a -- a necessary step.</p> <p>15 Q. (BY MR. EWALT) It's necessary to identify</p> <p>16 counterfactual world in order to reach conclusions</p> <p>17 about whether conduct is anticompetitive?</p> <p>18 MS. YOUNG: Objection; form.</p> <p>19 A. It is -- no, sometimes there is some degree</p> <p>20 of uncertainty, so it might not be identifying a</p> <p>21 single point. But broadly speaking, yes.</p> <p>22 Q. (BY MR. EWALT) You referred to outcomes.</p> <p>23 A. Yes.</p> <p>24 Q. And what sorts of outcomes do you compare the</p> <p>25 actual world to the counterfactual world?</p>	<p style="text-align: right;">Page 157</p> <p>1 Q. (BY MR. EWALT) If Google offers products that</p> <p>2 help publishers make more money, would that be</p> <p>3 competition on the merits?</p> <p>4 MS. YOUNG: Objection; form.</p> <p>5 A. If Google -- yes, the publishers are the</p> <p>6 customers of -- of Google one of the things they're</p> <p>7 interested is making money, so if Google assists them</p> <p>8 in so doing, that -- that is -- I don't know if we</p> <p>9 would call it competition on the merits. It's a</p> <p>10 good -- it's a -- it's a favorable thing for those</p> <p>11 customers.</p> <p>12 Q. (BY MR. EWALT) If Google offers products that</p> <p>13 help advertisers win more impressions or achieve a</p> <p>14 better return on ad spend, would that be competition</p> <p>15 on the merits?</p> <p>16 MS. YOUNG: Objection; form.</p> <p>17 A. If there are -- for the return on ad spend,</p> <p>18 that is in terms of winning impressions, if they're</p> <p>19 helping them win impressions overall, yes.</p> <p>20 Q. (BY MR. EWALT) Is it legitimate for Google to</p> <p>21 try to help publishers make more money?</p> <p>22 MS. YOUNG: Objection; form.</p> <p>23 A. The word "legitimate" is -- seems to be a</p> <p>24 legal term from an economic perspective. We consider</p> <p>25 that many firms operating in a business-to-business</p>



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<p style="text-align: right;">Page 158</p> <p>1 market try to help their customers earn more.</p> <p>2 Q. (BY MR. EWALT) From an economic perspective,</p> <p>3 is it legitimate for Google to try to help publishers</p> <p>4 make more money?</p> <p>5 MS. YOUNG: Objection; form.</p> <p>6 A. Again, the -- the term you're saying is</p> <p>7 "legitimate," which is not -- is not a sort of</p> <p>8 economics term that we would use.</p> <p>9 Can it be welfare increasing for -- for</p> <p>10 Google to offer ways of which publishers can make more</p> <p>11 money, yes, it can be.</p> <p>12 Q. (BY MR. EWALT) Is it procompetitive for</p> <p>13 Google to help publishers make more money?</p> <p>14 MS. YOUNG: Objection; form.</p> <p>15 A. It would be the sort of thing we would expect</p> <p>16 to see arise in a competitive market.</p> <p>17 Q. (BY MR. EWALT) Would you expect in a</p> <p>18 competitive market for Google to try to help</p> <p>19 advertisers win more impressions or achieve a better</p> <p>20 return on ad spend?</p> <p>21 MS. YOUNG: Objection; form.</p> <p>22 A. In a competitive market, depending a little</p> <p>23 bit on the context, advertising is a little bit of a</p> <p>24 tricky industry, but yes, it could be -- we would</p> <p>25 expect to see that when there was competition for</p>	<p style="text-align: right;">Page 160</p> <p>1 MS. YOUNG: Objection; form.</p> <p>2 A. Is it possible?</p> <p>3 THE WITNESS: Sorry.</p> <p>4 MS. YOUNG: Go ahead.</p> <p>5 A. Is it possible?</p> <p>6 Q. (BY MR. EWALT) Let me ask it again.</p> <p>7 Is it possible for a company that is</p> <p>8 vertically integrated across multiple markets and that</p> <p>9 has monopoly power in those markets to compete without</p> <p>10 harming competition?</p> <p>11 MS. YOUNG: Objection; form.</p> <p>12 A. Yes.</p> <p>13 Q. (BY MR. EWALT) Is vertical integration</p> <p>14 anticompetitive?</p> <p>15 MS. YOUNG: Objection; form.</p> <p>16 A. Vertical integration can be anticompetitive,</p> <p>17 but it can also be not anticompetitive.</p> <p>18 Q. (BY MR. EWALT) And can vertical integration</p> <p>19 be procompetitive?</p> <p>20 MS. YOUNG: Objection; form.</p> <p>21 A. Vertical integration could be something that</p> <p>22 we see emerge in competitive markets.</p> <p>23 Q. (BY MR. EWALT) In your reports, do you offer</p> <p>24 opinion as whether Google's vertical integration is</p> <p>25 anticompetitive?</p>
<p style="text-align: right;">Page 159</p> <p>1 those advertisers.</p> <p>2 Q. (BY MR. EWALT) Is it welfare enhancing for</p> <p>3 Google to try to help advertisers win more impressions</p> <p>4 or achieve a better return on ad spend?</p> <p>5 MS. YOUNG: Objection; form.</p> <p>6 A. Well, advertising is a controversial thing.</p> <p>7 But, generally speaking, we take advertising as a</p> <p>8 normal economic product having a competition spur</p> <p>9 Google to do things that are in an advertiser's</p> <p>10 interest is potentially welfare enhancing.</p> <p>11 Q. (BY MR. EWALT) Can conduct harm competitors</p> <p>12 without that conduct being anticompetitive?</p> <p>13 MS. YOUNG: Objection; form.</p> <p>14 A. Yes.</p> <p>15 Q. (BY MR. EWALT) Would you agree that it's</p> <p>16 impossible to conclude whether conduct is</p> <p>17 anticompetitive by looking exclusively at the impact</p> <p>18 of that conduct on competitors?</p> <p>19 MS. YOUNG: Objection; form.</p> <p>20 A. I wouldn't agree with that because it really</p> <p>21 depends on the context.</p> <p>22 Q. (BY MR. EWALT) Is it possible for a company</p> <p>23 that is vertically integrated across multiple markets</p> <p>24 and has monopoly power in those markets to compete</p> <p>25 without harming competition?</p>	<p style="text-align: right;">Page 161</p> <p>1 A. In my report, what I say about Google's</p> <p>2 vertical integration is that it played a key role in</p> <p>3 motivating the anticompetitive conduct of Google.</p> <p>4 Q. And -- but in your reports, do you offer an</p> <p>5 opinion as to whether Google's vertical integration</p> <p>6 itself is anticompetitive?</p> <p>7 MS. YOUNG: Objection; form.</p> <p>8 A. Its vertical integration was not a conduct</p> <p>9 that I evaluated.</p> <p>10 Q. (BY MR. EWALT) All right. Let's switch gears</p> <p>11 and talk about tying.</p> <p>12 A. Okay.</p> <p>13 Q. Does tying involve two separate products?</p> <p>14 MS. YOUNG: Objection; form.</p> <p>15 A. Typically, yes.</p> <p>16 Q. (BY MR. EWALT) And are those products</p> <p>17 referred to as the "tying product" and the "tied</p> <p>18 product"?</p> <p>19 A. Yes. We sometimes try to describe them that</p> <p>20 way, even though I wish we had different terminology.</p> <p>21 Q. Safe that one for after the depo.</p> <p>22 In your tying analysis, did you consider</p> <p>23 AdX to be the tying product and DFP to be the tied</p> <p>24 product?</p> <p>25 Right. Let me help you out here.</p>

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<p>1 A. That's exactly why I --</p> <p>2 Q. Opening report, Paragraph 414.</p> <p>3 A. Thank you.</p> <p>4 Paragraph 414. Sorry.</p> <p>5 Q. Yes.</p> <p>6 Second sentence.</p> <p>7 A. Yes.</p> <p>8 "Google conditioned the use of AdX (the</p> <p>9 tying product) with the sale of DFP -- of its DFP ad</p> <p>10 server (the tied product ). "</p> <p>11 Q. So in your tying analysis, did you consider</p> <p>12 AdX to be the tying product and DFP to be the tied</p> <p>13 product?</p> <p>14 A. I did.</p> <p>15 Q. Do AdX Direct Tags enable third-party ad</p> <p>16 servers to call AdX to serve an ad?</p> <p>17 MS. YOUNG: Objection; form.</p> <p>18 A. I believe that's what they used to be able to</p> <p>19 do when they were used.</p> <p>20 Q. (BY MR. EWALT) Do AdX Direct Tags allow a</p> <p>21 publisher to request ads from AdX in real time even if</p> <p>22 the publisher does not use DFP?</p> <p>23 MS. YOUNG: Objection; form.</p> <p>24 Q. (BY MR. EWALT) And I can -- you can take a</p> <p>25 look at Paragraph 429 of your opening report if that's</p>	<p>1 Q. Have AdX direct tags been in use since at</p> <p>2 least 2014?</p> <p>3 A. They have been in use at the data set we --</p> <p>4 they were listed as being in use in the data set we</p> <p>5 evaluated.</p> <p>6 Q. And in use in that data set since at least</p> <p>7 2014?</p> <p>8 A. That is correct.</p> <p>9 Q. Can a publisher still use AdX direct tags</p> <p>10 today?</p> <p>11 MS. YOUNG: Objection; form.</p> <p>12 A. As I understand it, these were legacy things</p> <p>13 that -- so they may still exist, some publishers that</p> <p>14 could use them.</p> <p>15 Q. (BY MR. EWALT) Is it your understanding that</p> <p>16 AdX sends real-time bids into DFP?</p> <p>17 A. That is my understanding.</p> <p>18 Q. What is the basis of that understanding?</p> <p>19 A. Oh, sorry. AdX sends real-time bids into --</p> <p>20 AdX is the -- as the DFP allows publishers to offer</p> <p>21 inventory that is -- can receive real-time bids.</p> <p>22 Q. Let me -- let me ask that question again. If</p> <p>23 you don't understand the question, let me know.</p> <p>24 A. Okay.</p> <p>25 Q. Is it your understanding that AdX sends</p>
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<p>1 helpful.</p> <p>2 A. Okay.</p> <p>3 Q. And then I'll ask it again. Let me know when</p> <p>4 you're ready.</p> <p>5 A. Thank you very much.</p> <p>6 Yes. Yes, it could.</p> <p>7 Q. Let me just ask it so we have a clear record</p> <p>8 here.</p> <p>9 A. Uh-huh.</p> <p>10 Q. Do AdX Direct Tags allow a publisher to</p> <p>11 request ads from AdX in real time even if the</p> <p>12 publisher does not use DFP?</p> <p>13 MS. YOUNG: Objection; form.</p> <p>14 A. Yes.</p> <p>15 Q. (BY MR. EWALT) Do AdX Direct Tags allow a</p> <p>16 publisher to receive tags from AdX even if a publisher</p> <p>17 does not use DFP?</p> <p>18 A. I believe they do.</p> <p>19 Q. All right. Could you please turn to Page 157</p> <p>20 of your report.</p> <p>21 You see Figure 12 there?</p> <p>22 A. Yes.</p> <p>23 Q. And the red dots refer to AdX direct tag,</p> <p>24 right?</p> <p>25 A. Yes.</p>	<p>1 real-time bids into DFP?</p> <p>2 MS. YOUNG: Objection; form.</p> <p>3 A. I'm not quite sure I understand the question.</p> <p>4 Q. (BY MR. EWALT) What's tripping you up on the</p> <p>5 question?</p> <p>6 A. The word "send bids."</p> <p>7 Q. Okay. We can move on.</p> <p>8 You analyze tying in your reports.</p> <p>9 Is that fair?</p> <p>10 A. I do.</p> <p>11 Q. And how did Google implement the tie?</p> <p>12 A. Well, it did several things. I describe it</p> <p>13 sort of at a high level in part of my report and then</p> <p>14 more detail later on.</p> <p>15 But basically the tie between AdX and</p> <p>16 DFP started -- if I look at -- just so you're on the</p> <p>17 same page, at Paragraph 416 of my opening report.</p> <p>18 It started in 2009 when Google imposed</p> <p>19 some technical limitations preventing publishers from</p> <p>20 using third-party ad servers to be able to sell into</p> <p>21 Google's ad exchange in its real-time open options.</p> <p>22 And then in 2016 it actually made that a</p> <p>23 contractual tie. That means that publishers who</p> <p>24 wanted to access demand coming through AdX real-time</p> <p>25 or otherwise were forced to -- forced -- they were</p>

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<p style="text-align: right;">Page 166</p> <p>1 forced to sign a DFP/AdX contract. Was the only way</p> <p>2 they could do so. And that gave -- made it a</p> <p>3 contractual tie.</p> <p>4 Q. All right. So if I understand this right,</p> <p>5 it's your opinion that Google implemented the alleged</p> <p>6 tie of DFP to AdX through technical limitations</p> <p>7 beginning in 2019 [verbatim] and contractual</p> <p>8 provisions beginning in 2016?</p> <p>9 MS. YOUNG: Objection; form.</p> <p>10 A. That is correct.</p> <p>11 MS. YOUNG: And think I you meant 2009.</p> <p>12 I think you said 2019.</p> <p>13 MR. EWALT: Thank you very much.</p> <p>14 MS. YOUNG: Just for the purpose of the</p> <p>15 record, yeah.</p> <p>16 MR. EWALT: I'll fix it.</p> <p>17 Q. (BY MR. EWALT) Is it your opinion that Google</p> <p>18 implemented the alleged tie of DFP to AdX through</p> <p>19 technical limitations beginning in 2009 and</p> <p>20 contractual provisions beginning in 2016?</p> <p>21 A. Okay. Yes, that is my opinion. It's my</p> <p>22 understanding.</p> <p>23 Q. What technical limitations are you referring</p> <p>24 to?</p> <p>25 A. Okay. So if we go to -- technical</p>	<p style="text-align: right;">Page 168</p> <p>1 A. That was the critical decision point because</p> <p>2 at that point Google had the evidence that I -- that</p> <p>3 I -- that I -- I list there the ability to offer</p> <p>4 third-party ad servers access to real-time bidding.</p> <p>5 Q. (BY MR. EWALT) And that technology, that</p> <p>6 technical limitation, is called third-party Dynamic</p> <p>7 Allocation; is that right?</p> <p>8 A. Yes. Well, that's -- that wasn't a technical</p> <p>9 limitation. That was a technical -- that was a -- a</p> <p>10 technically feasible thing.</p> <p>11 Q. And it was a limitation because --</p> <p>12 A. They --</p> <p>13 (Speaking simultaneously.)</p> <p>14 Q. (BY MR. EWALT) -- it could do more?</p> <p>15 A. No, because they didn't actually offer it.</p> <p>16 Q. Ah, okay. So a technical limitation that</p> <p>17 effectuated a tie --</p> <p>18 A. Yes.</p> <p>19 Q. -- was Google's decision in 2009 not to offer</p> <p>20 third-party Dynamic Allocation?</p> <p>21 A. Right. And if they had offered that, there</p> <p>22 wouldn't be a tie.</p> <p>23 Q. Okay. So as of 2009, is it your view that</p> <p>24 Google's refusal to offer third-party Dynamic</p> <p>25 Allocation as a way to integrate AdX with third-party</p>
<p style="text-align: right;">Page 167</p> <p>1 limitations I refer to.</p> <p>2 Q. I'll suggest a paragraph. You tell me if</p> <p>3 this is the right one.</p> <p>4 A. 424.</p> <p>5 Q. I was going to go 435.</p> <p>6 A. Oh, okay.</p> <p>7 Q. But you tell me if it's that -- if that's not</p> <p>8 right.</p> <p>9 A. Yes. Yes, that's one of the technical</p> <p>10 limitations.</p> <p>11 Q. Okay. And were there other technical</p> <p>12 limitations, other than the one that you refer to in</p> <p>13 Paragraph 435, through which Google implemented the</p> <p>14 tie?</p> <p>15 A. I think not necessarily 2009, but there were</p> <p>16 other things that emerged that I described earlier</p> <p>17 regarding how they implemented their GPT tags and</p> <p>18 other tags that had limitations on them as well.</p> <p>19 Q. But is it -- is it fair to say that there was</p> <p>20 not a tie until this technology that you're talking</p> <p>21 about -- technical limitation, rather, that you're</p> <p>22 talking about in 2009?</p> <p>23 A. Yeah. That was --</p> <p>24 MS. YOUNG: Objection; form.</p> <p>25 Go ahead.</p>	<p style="text-align: right;">Page 169</p> <p>1 ad servers was anticompetitive?</p> <p>2 MS. YOUNG: Objection; form.</p> <p>3 A. That was the -- what I've said is that</p> <p>4 Google's tying behavior and sort of, as you can see</p> <p>5 it, ratcheted it up. That consequence of that was</p> <p>6 anticompetitive.</p> <p>7 Q. (BY MR. EWALT) Do you think --</p> <p>8 A. It took them some time to get the full force</p> <p>9 of it in.</p> <p>10 Q. When did the full force occur?</p> <p>11 A. I would say that I would -- if I had to give</p> <p>12 a date, I would mark that as 2016.</p> <p>13 Q. Do you think that Google should have offered</p> <p>14 third-party Dynamic Allocation to allow competing</p> <p>15 publisher ad servers to receive real-time bids from</p> <p>16 AdX?</p> <p>17 MS. YOUNG: Objection; form.</p> <p>18 A. My opinion is that had Google not had market</p> <p>19 power through AdX and had not been vertically</p> <p>20 integrated, that they -- and their ads of a product</p> <p>21 would have offered third-party Dynamic Allocation.</p> <p>22 Q. (BY MR. EWALT) And is it your opinion that it</p> <p>23 was anticompetitive for Google not to build technology</p> <p>24 that would have allowed competing publisher ad servers</p> <p>25 to receive real-time bids from AdX?</p>

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<p style="text-align: right;">Page 170</p> <p>1 MS. YOUNG: Objection; form.</p> <p>2 A. My view is that it is anticompetitive for the</p> <p>3 reasons that I just said.</p> <p>4 Q. (BY MR. EWALT) Okay. I just want to -- I</p> <p>5 think this is a yes-or-no question, but if it's not</p> <p>6 let me know.</p> <p>7 Is it your opinion that it was anticompetitive</p> <p>8 for Google not to build technology that would have</p> <p>9 allowed competing publisher ad servers to receive</p> <p>10 real-time bids from AdX?</p> <p>11 MS. YOUNG: Objection; form.</p> <p>12 A. I think it was anticompetitive for Google to</p> <p>13 choose to tie its product when it need not have tied</p> <p>14 its product.</p> <p>15 Q. (BY MR. EWALT) Right. And -- but I'm trying</p> <p>16 to understand what you mean by tie, and at least in</p> <p>17 the 2009 period here.</p> <p>18 A. Well, you -- you -- you --</p> <p>19 MS. YOUNG: I don't think there's a</p> <p>20 pending question.</p> <p>21 THE WITNESS: Oh, okay.</p> <p>22 MS. YOUNG: Let him ask the question and</p> <p>23 make a clearer record.</p> <p>24 Q. (BY MR. EWALT) What did you want to say?</p> <p>25 A. Google had the ability on behalf of its</p>	<p style="text-align: right;">Page 172</p> <p>1 functionality.</p> <p>2 Therefore, using the process of</p> <p>3 analyzing anticompetitive conduct that I outlined to</p> <p>4 you some time ago, my conclusion is it is</p> <p>5 anticompetitive -- that the tie was anticompetitive in</p> <p>6 this regard.</p> <p>7 Q. (BY MR. EWALT) All right. Now, I -- I</p> <p>8 appreciate you trying to help me understand here. I</p> <p>9 think I do understand and I think you can answer my</p> <p>10 question with a "yes" or "no."</p> <p>11 A. Yes.</p> <p>12 Q. So I'm going to try again.</p> <p>13 MS. YOUNG: I'm going to move to strike</p> <p>14 everything that was just said as not a pending</p> <p>15 question.</p> <p>16 Q. (BY MR. EWALT) If it was costless for Google</p> <p>17 to offer technology that would have allowed competing</p> <p>18 publisher ad servers to receive real-time bids from</p> <p>19 AdX, would it have been anticompetitive for Google not</p> <p>20 to offer such technology?</p> <p>21 MS. YOUNG: Objection; form.</p> <p>22 A. Let me put it this way. Yes, because the</p> <p>23 only reason they were not offering that technology was</p> <p>24 because they were trying to enhance their monopoly</p> <p>25 position in the market for ad servers.</p>
<p style="text-align: right;">Page 171</p> <p>1 publishers to offer on behalf of -- of -- of</p> <p>2 publishers who were using AdX to offer</p> <p>3 interruptibility with third-party ad servers.</p> <p>4 And the question is: From an economic</p> <p>5 perspective, what was the decision?</p> <p>6 And because they had that feasibility</p> <p>7 and it was effectively costless for them to do so,</p> <p>8 their decision was a decision to turn that off.</p> <p>9 So in your framing of it, you are</p> <p>10 framing it as a decision to turn it on which I was</p> <p>11 concerned at characterizing that way because it may</p> <p>12 have implied that there were costs to it from doing</p> <p>13 so.</p> <p>14 And that is not my reading of the</p> <p>15 evidence presented here.</p> <p>16 Q. Okay. If it was costless for Google to offer</p> <p>17 technology that would have allowed competing publisher</p> <p>18 ad servers to receive real-time bids from AdX, was --</p> <p>19 would it have been anticompetitive for Google not to</p> <p>20 offer such technology?</p> <p>21 MS. YOUNG: Objection; form.</p> <p>22 A. My analysis is that we cannot know that</p> <p>23 decision looking at the counterfactual. But had they</p> <p>24 not had monopoly power and been vertically integrated,</p> <p>25 my assessment is they would have offered that</p>	<p style="text-align: right;">Page 173</p> <p>1 Q. (BY MR. EWALT) If there were costs to Google</p> <p>2 of offering technology that would have allowed</p> <p>3 competing publisher ad servers to receive real-time</p> <p>4 bids from AdX, would it have been anticompetitive for</p> <p>5 Google not to offer such technology?</p> <p>6 MS. YOUNG: Objection; form.</p> <p>7 A. It would depend on the magnitude of those</p> <p>8 costs.</p> <p>9 If those costs were low, my answer would</p> <p>10 not change from the costless case.</p> <p>11 If those costs were extremely high, my</p> <p>12 answer would be different.</p> <p>13 Q. (BY MR. EWALT) Let's talk about the</p> <p>14 contractual tie.</p> <p>15 A. Okay.</p> <p>16 Q. Could you turn to Paragraph 446, please, of</p> <p>17 your opening report.</p> <p>18 A. Okay.</p> <p>19 Q. All right. Is it your opinion that Google</p> <p>20 contractually required publishers to use DFP in order</p> <p>21 to access AdX demand?</p> <p>22 A. My understanding is that for contracts that</p> <p>23 were put in place that you and publisher contracts,</p> <p>24 for instance, that the two products were tied</p> <p>25 contractually.</p>

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<p>1 Q. And I'm trying to understand what you mean by</p> <p>2 "tied contractually."</p> <p>3 A. It meant that if you wanted to access AdX</p> <p>4 demands, you have to use DFP.</p> <p>5 Q. Okay. So I just want to confirm that it is,</p> <p>6 in fact, your opinion that Google's contracts required</p> <p>7 publishers to use DFP in order to obtain access to AdX</p> <p>8 demand?</p> <p>9 MS. YOUNG: Objection; form.</p> <p>10 A. My understanding of -- of those contracts --</p> <p>11 and I will caveat that it is my understanding because</p> <p>12 I am not a lawyer -- was that that's what they</p> <p>13 would -- would do.</p> <p>14 MS. YOUNG: So we've been going over an</p> <p>15 hour, so it's just for court reporter's purposes and</p> <p>16 everyone else's that we break at a good time.</p> <p>17 MR. EWALT: Okay.</p> <p>18 Q. (BY MR. EWALT) And I believe you said that</p> <p>19 Google implemented this contractual tie in June 2016?</p> <p>20 A. Yes.</p> <p>21 Q. And so there was no contractual tie before</p> <p>22 June 2016; is that correct?</p> <p>23 MS. YOUNG: Objection; form.</p> <p>24 A. That is my -- well, that -- that's -- that's</p> <p>25 my understanding of what a contractual tie was of that</p>	<p>1 as listed in the footnotes here.</p> <p>2 Q. (BY MR. EWALT) But you did not rely on the</p> <p>3 contracts themselves in reaching your opinions about</p> <p>4 the contractual tie.</p> <p>5 Is that fair?</p> <p>6 MS. YOUNG: Objection; form.</p> <p>7 A. I didn't feel it was -- I -- it was not my</p> <p>8 role to provide a legal analysis of those, which is</p> <p>9 what you're asking for there.</p> <p>10 Q. (BY MR. EWALT) Could you please turn to</p> <p>11 Paragraph 297 of your rebuttal report.</p> <p>12 A. Yes.</p> <p>13 Q. And that paragraph describes a communication</p> <p>14 from Google to publishers in connection with the move</p> <p>15 to the unified contract; is that right?</p> <p>16 MS. YOUNG: Objection; form.</p> <p>17 A. Can you repeat the question?</p> <p>18 Q. (BY MR. EWALT) Does Paragraph 297 of your</p> <p>19 rebuttal report describe the communication from Google</p> <p>20 to publishers about the transition to the unified DFP</p> <p>21 AdX contract?</p> <p>22 A. Yes.</p> <p>23 Q. I want to direct your attention to the second</p> <p>24 sentence there -- third sentence, reads: "The message</p> <p>25 states to continue using AdX, our partners now need to</p>
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<p>1 date.</p> <p>2 Q. (BY MR. EWALT) Is it your opinion that the</p> <p>3 contractual tie is contained in the unified DFP AdX</p> <p>4 contract?</p> <p>5 MS. YOUNG: Objection; form.</p> <p>6 A. I believe that that's where it is.</p> <p>7 Q. (BY MR. EWALT) Have you ever reviewed a</p> <p>8 unified DFP AdX contract?</p> <p>9 A. I have looked at it. And had a normal</p> <p>10 reaction to the contract.</p> <p>11 Q. You don't cite a unified DFP AdX contract in</p> <p>12 your reports, do you?</p> <p>13 MS. YOUNG: Objection; form.</p> <p>14 A. No, I cite other things describing these</p> <p>15 things.</p> <p>16 Q. (BY MR. EWALT) But it's your testimony that</p> <p>17 you have, in fact, reviewed such a contract?</p> <p>18 A. I believe at some time that I did, but I</p> <p>19 remember I -- I don't remember it as something I felt</p> <p>20 I could pass.</p> <p>21 Q. Is it fair to say you didn't rely on the</p> <p>22 terms of the unified DFP AdX contract in forming the</p> <p>23 opinions in your reports?</p> <p>24 MS. YOUNG: Objection; form.</p> <p>25 A. I relied on the descriptions of these things</p>	<p>1 sign a new contract that includes terms for both AdX</p> <p>2 and DFP. This contract will give you access to DFP</p> <p>3 features, but there is no obligation to use them."</p> <p>4 Do you see that?</p> <p>5 A. Yes.</p> <p>6 Q. And so you understand that when it was</p> <p>7 rolling out the unified DFP AdX contract, Google told</p> <p>8 publishers that they would have no obligation to use</p> <p>9 DFP; is that right?</p> <p>10 MS. YOUNG: Objection; form.</p> <p>11 A. I -- I acknowledge that's what it says in my</p> <p>12 report.</p> <p>13 Q. (BY MR. EWALT) And did you have -- how does</p> <p>14 the fact that Google told publishers that there was no</p> <p>15 obligation to use DFP inform your analysis of whether</p> <p>16 the unified DFP AdX contract actually required</p> <p>17 publishers to use DFP?</p> <p>18 MS. YOUNG: Objection; form.</p> <p>19 A. Well, it did require them to sign that -- I</p> <p>20 don't -- I'm not sure the distinction you're trying</p> <p>21 to -- to make.</p> <p>22 MS. YOUNG: Mr. Ewalt, is this --</p> <p>23 MR. EWALT: This is a good time for a</p> <p>24 break. Yeah. Go off the record.</p> <p>25 THE VIDEOGRAPHER: Now the end of</p>

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<p>1 Video 4 of Joshua Gans. Off the record. The time is 2 2:44. 3 (Break from 2:44 p.m. to 3:00 p.m.) 4 THE VIDEOGRAPHER: We're now on the 5 record. Video 5 of Joshua Gans. The time is 6 approximately 3:00. 7 Q. (BY MR. EWALT) Professor Gans, did you 8 discuss the substance of your testimony with counsel 9 during the break? 10 MS. YOUNG: Same instruction that we've 11 been giving previously, that the expert stipulation in 12 this case prohibits the disclosure of the -- the 13 contents of communication between the testifying 14 expert and counsel. 15 So based on that, I instruct 16 Professor Gans not to disclose the contents of his 17 communications with counsel. 18 MR. EWALT: Based on that instruction, 19 we will move on. 20 Q. (BY MR. EWALT) If Google enabled AdX to send 21 real-time bids to third-party publisher ad servers, 22 would that resolve any competition concerns about 23 Google tying DFP to AdX? 24 MS. YOUNG: Objection; form. 25 A. It depends what you mean by "sends real-time</p>	<p>1 could publishers use DFP or Google Ad Manager to set 2 price floors for ad exchanges other than AdX? 3 MS. YOUNG: Objection; form. 4 A. They could set price floors for -- they could 5 set price floors for -- sorry. My... 6 Yes, they could. 7 Q. (BY MR. EWALT) And I want to make sure you 8 heard part of the question here, is could they -- 9 could they use DFP or Google Ad Manager, so let me 10 start over. 11 A. Okay. 12 Q. Before Google implemented UPR, could 13 publishers use DFP or Google Ad Manager to set price 14 floors for ad exchanges other than AdX? 15 MS. YOUNG: Objection; form. 16 A. My understanding is that they -- they could 17 by the way that they integrated with Header Bidding. 18 Q. (BY MR. EWALT) If publishers could not use 19 DFP or Google Ad Manager to set price floors for ad 20 exchanges other than AdX before UPR, would that affect 21 your analysis of the competitive effects from UPR? 22 MS. YOUNG: Objection; form. 23 A. My understanding was that UPR was a 24 restriction on the differential price floors that 25 publishers could set through DFP. I'm -- if I am to</p>
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<p>1 bids" and if they started allowing that right now the 2 consequences of the previous time would still be with 3 us. 4 Q. (BY MR. EWALT) Okay. If Google had enabled 5 AdX to send real-time bids to third-party publisher ad 6 servers in 2009, would you have any competition 7 concerns related to a tie of DFP to AdX? 8 MS. YOUNG: Objection; form. 9 A. I think if we recall from our earlier 10 discussion, it is -- it would -- had they implemented 11 third-party Dynamic Allocation back there in 2009, my 12 analysis of the factual and the counterfactual would 13 have been different. 14 I cannot, without conducting that 15 analysis, tell you whether it would have been the 16 same, but that was -- I would change my -- I would -- 17 I would likely change my analysis significantly. 18 Q. (BY MR. EWALT) Let's talk about Unified 19 Pricing Rules. UPR. 20 And I can direct you to Paragraph 476 of your 21 opening report. 22 MS. YOUNG: Sorry. Give me one second 23 to get there. 476. 24 Okay. 25 Q. (BY MR. EWALT) Before Google implemented UPR,</p>	<p>1 understand what you're asking me as a hypothetical, 2 you're saying is if UPR existed before you UPR would 3 UPR have had an -- had a -- an impact. 4 Q. (BY MR. EWALT) Yeah. That's not exactly what 5 I was trying to ask, so it's -- 6 A. Yeah, so -- 7 Q. -- a bad question. 8 A. Yeah, so I guess I didn't understand your 9 question. 10 Q. Maybe it was a bad question. 11 Before UPR, how did publishers set 12 differential price floors for ad exchanges? 13 MS. YOUNG: Objection; form. 14 A. My understanding and my -- my -- my analysis 15 concentrates on what they could and could not do as 16 opposed to the precise -- necessarily the precise 17 nature in which they engaged in that activity, but I 18 believe that it was through the specification, call it 19 coding or -- or -- or filling in of line items to 20 guide the bidding behavior, that publishers were able 21 to set different price floors for different buyers 22 exchanges and advertising sources. 23 Q. (BY MR. EWALT) Did UPR simplify the process 24 of configuring price floors for publishers? 25 MS. YOUNG: Objection; form.</p>

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<p style="text-align: right;">Page 182</p> <p>1 A. The specific requirement of UPR that</p> <p>2 restricted that ability did not simplify things for</p> <p>3 publishers.</p> <p>4 Q. (BY MR. EWALT) Does UPR have any effect on a</p> <p>5 publisher that chooses not to use DFP?</p> <p>6 MS. YOUNG: Objection; form.</p> <p>7 A. As I understand it, UPR was implemented</p> <p>8 through DFP, So not directly for other people.</p> <p>9 Q. (BY MR. EWALT) Does UPR require that the</p> <p>10 same price floors apply to AdX and other exchanges?</p> <p>11 A. Well, there were some restrictions on how you</p> <p>12 could differentiate your price floors between</p> <p>13 exchanges, as I understood it.</p> <p>14 Q. Does UPR prevent publishers from setting</p> <p>15 price floors in Google Ad Manager at advantaged AdX</p> <p>16 over other ad exchanges?</p> <p>17 MS. YOUNG: Objection; form.</p> <p>18 A. I don't think that they did. I -- I -- I</p> <p>19 believe that the -- I can't recall exactly, but I</p> <p>20 thought there might be -- I -- I recall an asymmetry</p> <p>21 with how those price floors -- the UPR rules applied.</p> <p>22 Q. (BY MR. EWALT) Should Google be required to</p> <p>23 allow its customers to use Google Ad Manager in a way</p> <p>24 that disadvantages AdX?</p> <p>25 MS. YOUNG: Objection; form.</p>	<p style="text-align: right;">Page 184</p> <p>1 discussion throughout that section.</p> <p>2 Q. Did you consider it an economic methodology</p> <p>3 to examine Google's intent?</p> <p>4 MS. YOUNG: Objection; form.</p> <p>5 Go ahead.</p> <p>6 A. I -- it is common in antitrust cases for</p> <p>7 economists to consider documents that were produced</p> <p>8 either under oath or in context where we believe that</p> <p>9 they were not guided by -- that they were guided by</p> <p>10 market prices.</p> <p>11 Q. (BY MR. EWALT) Is it common for economists to</p> <p>12 render opinions about a company's intent?</p> <p>13 A. Yeah --</p> <p>14 MS. YOUNG: Objection; form.</p> <p>15 Go ahead.</p> <p>16 A. Yeah. Yes.</p> <p>17 Q. (BY MR. EWALT) Do you consider yourself an</p> <p>18 expert in understanding the intent behind company's</p> <p>19 actions?</p> <p>20 A. That is one of the things that I do as an</p> <p>21 economics -- economics scholar.</p> <p>22 Q. Have you had any specialized training in</p> <p>23 understanding the intent behind company's actions?</p> <p>24 A. Yes.</p> <p>25 Q. What is that training?</p>
<p style="text-align: right;">Page 183</p> <p>1 A. The way that I look at it is the way that I</p> <p>2 looked at all conduct in this case. This is not a</p> <p>3 requirements matter but an anticompetitive analysis</p> <p>4 matter.</p> <p>5 Q. (BY MR. EWALT) Is it anticompetitive for</p> <p>6 Google to prevent its customers from using Google Ad</p> <p>7 Manager in a way that disadvantages AdX?</p> <p>8 MS. YOUNG: Objection; form.</p> <p>9 A. Because of Google's market power, yeah. Well</p> <p>10 the word "disadvantage" is the -- is the interesting</p> <p>11 one, but because of Google's market power imposing the</p> <p>12 restrictions that they did was anticompetitive.</p> <p>13 Q. (BY MR. EWALT) Can you please turn to</p> <p>14 Paragraph 480 of your opening report.</p> <p>15 A. Yes.</p> <p>16 Q. The first sentence there reads: "In this</p> <p>17 section I analyze Google's intent in imposing UPR on</p> <p>18 publishers."</p> <p>19 Do you see that?</p> <p>20 A. Yes.</p> <p>21 Q. What methodology did you use to reach</p> <p>22 conclusions about Google's intent?</p> <p>23 A. I examined the evidence available.</p> <p>24 Q. What evidence did you examine?</p> <p>25 A. Well, the evidence is listed there in my</p>	<p style="text-align: right;">Page 185</p> <p>1 A. I did my Ph.D. at Stanford University, and</p> <p>2 part of my specialty was working on the understanding</p> <p>3 of the operation of organizations, including the</p> <p>4 actions that they would take and why they might take</p> <p>5 those actions.</p> <p>6 Q. And you studied incentives, correct?</p> <p>7 A. Definitely studied incentives.</p> <p>8 Q. And that -- the incentives would be what an</p> <p>9 economist would evaluate in order to understand what</p> <p>10 was motivating a company, correct?</p> <p>11 MS. YOUNG: Objection; form.</p> <p>12 A. That is one of the things.</p> <p>13 The other things they would understand</p> <p>14 the constraints that the companies faced, the</p> <p>15 information or structure of the companies, the</p> <p>16 communication flows within a company.</p> <p>17 These are all things that were very much</p> <p>18 impacted upon me during my Ph.D. studies and then</p> <p>19 throughout my career.</p> <p>20 Q. (BY MR. EWALT) And you -- when you were</p> <p>21 studying at Stanford your advisor was Paul Milgrom?</p> <p>22 A. Yes.</p> <p>23 Q. What do you think of Professor Milgrom?</p> <p>24 A. What do I think of him?</p> <p>25 Q. Uh-huh.</p>

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<p style="text-align: right;">Page 186</p> <p>1 A. I -- he is -- he was a terrific supervisor</p> <p>2 and is a -- has done work that has been inspiring to</p> <p>3 me as an economist.</p> <p>4 Q. Do you consider him an expert in auction</p> <p>5 design?</p> <p>6 A. Yes.</p> <p>7 Q. Can you think of anyone with more expertise</p> <p>8 in auction design than Paul Milgrom?</p> <p>9 MS. YOUNG: Objection; form.</p> <p>10 A. There are a lot of people with a lot of</p> <p>11 expertise in auction design. There are -- depending</p> <p>12 on the domain, some people have more expertise than</p> <p>13 Paul Milgrom. But in -- and in other domains, such as</p> <p>14 spectrum auctions, very few would have his expertise.</p> <p>15 Q. (BY MR. EWALT) Let's go back to Paragraph 480</p> <p>16 of your opening report where you talk about how you</p> <p>17 analyze Google's intent imposing UPR on publishers.</p> <p>18 A. Yes.</p> <p>19 Q. What do you mean by Google's intent?</p> <p>20 A. What I mean is that when Google was thinking</p> <p>21 about implementing UPR, what were the criteria that</p> <p>22 they used to justify, as it was a restriction on their</p> <p>23 own customers, doing that.</p> <p>24 Q. What do you mean by what "Google was</p> <p>25 thinking"?</p>	<p style="text-align: right;">Page 188</p> <p>1 to weigh the evidence of their intent, you pay</p> <p>2 attention to a lot of those -- a lot of those voices.</p> <p>3 Q. (BY MR. EWALT) A lot of which voices?</p> <p>4 A. The voices within the company.</p> <p>5 Q. The decision-makers or the</p> <p>6 nondecision-makers?</p> <p>7 A. Both.</p> <p>8 Q. And my question is: Which do you place</p> <p>9 greater weight on, the decision-makers or the</p> <p>10 nondecision-makers?</p> <p>11 MS. YOUNG: Objection; form.</p> <p>12 A. All other things being equal, depending on</p> <p>13 the availability of evidence, I guess you would place</p> <p>14 more decision weight on -- more -- sorry -- more</p> <p>15 weight on the decision-makers than the -- not, if that</p> <p>16 was clear.</p> <p>17 Q. (BY MR. EWALT) In your reports do you express</p> <p>18 any opinion as to whether UPR harmed competition in</p> <p>19 the market for publisher ad servers?</p> <p>20 MS. YOUNG: Objection; form.</p> <p>21 You may answer.</p> <p>22 A. I do not.</p> <p>23 Q. (BY MR. EWALT) In your reports do you express</p> <p>24 any opinion about whether UPR harmed competition in</p> <p>25 the market for small advertiser buying tools?</p>
<p style="text-align: right;">Page 187</p> <p>1 A. Well, obviously Google is made up of a lot of</p> <p>2 people. So what were the people inside of Google</p> <p>3 thinking?</p> <p>4 What were their expressed reasoning as</p> <p>5 to why they thought this would be a good policy for</p> <p>6 them.</p> <p>7 Q. Do you need to know every employee's thinking</p> <p>8 to reach conclusions about a company's intent?</p> <p>9 MS. YOUNG: Objection; form.</p> <p>10 A. No. You need to -- you need to know a</p> <p>11 combination of -- there's a combination of</p> <p>12 considering, as an economist, the likely intent and</p> <p>13 then looking at the evidence available to weigh it as</p> <p>14 to what is the plausibly -- plausible motivation.</p> <p>15 Q. (BY MR. EWALT) In reaching conclusions about</p> <p>16 a company's intent, do you place greater weight on</p> <p>17 evidence of the views of employees with</p> <p>18 decision-making authority than on the views of other</p> <p>19 employees?</p> <p>20 MS. YOUNG: Objection; form.</p> <p>21 A. One of the things that is very interesting</p> <p>22 about how organizations work is that people with</p> <p>23 decision-making authority are influenced by debates</p> <p>24 and discussions that others tend to have.</p> <p>25 And in looking at a company and trying</p>	<p style="text-align: right;">Page 189</p> <p>1 A. I do not.</p> <p>2 Q. Can you please turn to Page 180 of your</p> <p>3 opening report.</p> <p>4 Do you see that Figure 17 is an excerpt</p> <p>5 from a Google presentation describing the impact on</p> <p>6 publishers of the move to a unified first price</p> <p>7 auction with UPR?</p> <p>8 MS. YOUNG: Can you give me one second</p> <p>9 to catch up.</p> <p>10 Page 180.</p> <p>11 A. Yes.</p> <p>12 Q. (BY MR. EWALT) And the headline of that slide</p> <p>13 is "Pubs Made More Money."</p> <p>14 Do you see that?</p> <p>15 A. Yes.</p> <p>16 MS. YOUNG: Objection; form.</p> <p>17 Sorry. Go ahead.</p> <p>18 Q. (BY MR. EWALT) Did publishers make more money</p> <p>19 after Google moved to a unified first price auction</p> <p>20 with UPR?</p> <p>21 A. I don't think you could draw that conclusion</p> <p>22 from that assertion.</p> <p>23 Q. Have you seen any evidence that publishers</p> <p>24 made less money as a result of UPR?</p> <p>25 A. I see that there's evidence that publishers</p>

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<p style="text-align: right;">Page 190</p> <p>1 were not happy with UPR being imposed on them from</p> <p>2 which it is likely the case that it is harming their</p> <p>3 operations in some way.</p> <p>4 Q. But have you seen any evidence about the</p> <p>5 actual impact on publisher revenues of UPR?</p> <p>6 MS. YOUNG: Objection; form.</p> <p>7 A. In my rebuttal report I document some of</p> <p>8 these effects.</p> <p>9 Q. (BY MR. EWALT) Did UPR lower price floors on</p> <p>10 AdX?</p> <p>11 MS. YOUNG: Objection; form.</p> <p>12 A. I don't know.</p> <p>13 Q. (BY MR. EWALT) Can you turn to Paragraph 491</p> <p>14 to 496 of your opening report, please.</p> <p>15 A. Okay.</p> <p>16 Q. Did UPR lower price floors on AdX?</p> <p>17 A. Yes.</p> <p>18 Q. Did lower price floors on AdX allow</p> <p>19 advertisers to pay less for impressions?</p> <p>20 MS. YOUNG: Objection; form.</p> <p>21 A. Lower price floors on AdX, it's unknown when</p> <p>22 they are -- whether they are allowed advertiser to pay</p> <p>23 less because -- I'm sorry.</p> <p>24 The -- the lower price floors would</p> <p>25 allow more transactions to be completed.</p>	<p style="text-align: right;">Page 192</p> <p>1 decisions than they were previously making. And</p> <p>2 that's all it did.</p> <p>3 And as a result of that, one can infer,</p> <p>4 as a matter of economics, that the publishers were</p> <p>5 worse off who -- who found that a binding constraint.</p> <p>6 Q. (BY MR. EWALT) Do you know how many</p> <p>7 publishers found it a binding constraint?</p> <p>8 A. I don't have an exact number.</p> <p>9 Q. Have you heard of more than five publishers</p> <p>10 complaining about UPR?</p> <p>11 MS. YOUNG: Objection; form.</p> <p>12 A. I document some publishers complaining about</p> <p>13 UPR that we were able to receive evidence from in --</p> <p>14 including publishers that complained directly to</p> <p>15 Google.</p> <p>16 Q. (BY MR. EWALT) How many?</p> <p>17 MS. YOUNG: Objection; form.</p> <p>18 A. I don't think it matters how many.</p> <p>19 Q. (BY MR. EWALT) Okay. Have you expressed any</p> <p>20 opinion about how Dynamic Allocation -- or, strike</p> <p>21 that.</p> <p>22 Have you -- have you expressed any opinion</p> <p>23 about whether Dynamic Allocation harmed competition in</p> <p>24 any market other than the market for ad exchanges?</p> <p>25 A. I have expressed an opinion of how Google's</p>
<p style="text-align: right;">Page 191</p> <p>1 Q. (BY MR. EWALT) And would the -- the fact that</p> <p>2 more transactions could be completed benefit</p> <p>3 advertisers?</p> <p>4 MS. YOUNG: Objection; form.</p> <p>5 A. More transactions being completed could</p> <p>6 potentially benefit advertisers.</p> <p>7 Q. (BY MR. EWALT) And would UPR allowing more</p> <p>8 transactions to be completed also benefit publishers?</p> <p>9 MS. YOUNG: Objection; form.</p> <p>10 A. That is unlikely given that UPR was -- to the</p> <p>11 extent that it lowered price floors -- was something</p> <p>12 that the publishers would have chosen not to do.</p> <p>13 Q. (BY MR. EWALT) Well, you would agree that a</p> <p>14 publisher could make more revenue by selling more</p> <p>15 inventory at a lower price than selling less inventory</p> <p>16 at a higher price?</p> <p>17 That's a possibility it could work out that</p> <p>18 way, right?</p> <p>19 MS. YOUNG: Objection; form.</p> <p>20 A. No, not in this particular case. You have</p> <p>21 to -- we're talking about an actual restriction on the</p> <p>22 publishers.</p> <p>23 A publisher wants to set a particular</p> <p>24 price floor. If UPR lowered price floors, it was</p> <p>25 because it forced publishers to make different</p>	<p style="text-align: right;">Page 193</p> <p>1 implementation of Dynamic Allocation harmed market --</p> <p>2 harmed the market for ad exchanges, but not other, I</p> <p>3 did not express opinions with respect to other</p> <p>4 markets.</p> <p>5 Q. Was Dynamic Allocation a feature that</p> <p>6 DoubleClick launched in 2007?</p> <p>7 A. All right. You're testing --</p> <p>8 Q. All right.</p> <p>9 A. -- me on--</p> <p>10 Q. Opening report --</p> <p>11 (Speaking simultaneously.)</p> <p>12 A. But I'm sure you have --</p> <p>13 Q. (BY MR. EWALT) Opening report Paragraph 552.</p> <p>14 A. Thank you.</p> <p>15 Yes, I agree that in 2007 they had</p> <p>16 launched a feature they had called Dynamic Allocation.</p> <p>17 Q. And so Dynamic Allocation was launched before</p> <p>18 Google acquired DoubleClick?</p> <p>19 A. Well, the feature that they called it was,</p> <p>20 yes.</p> <p>21 Q. When Dynamic Allocation was launched, were ad</p> <p>22 networks the primary way that advertisers purchased</p> <p>23 display advertising?</p> <p>24 MS. YOUNG: Objection; form.</p> <p>25 A. The ad networks was one of them that was</p>

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<p>1 still Direct Deals as well.</p> <p>2 Q. (BY MR. EWALT) Did ad networks bid in real</p> <p>3 time?</p> <p>4 A. My understanding was that ad networks could</p> <p>5 not do bid by in real time.</p> <p>6 Q. Did ad networks purchase display inventory</p> <p>7 through sequential process known as the Waterfall?</p> <p>8 A. Yes.</p> <p>9 Q. Did the Waterfall lead to publishers missing</p> <p>10 out on more valuable ad inventory allocation?</p> <p>11 MS. YOUNG: Objection; form.</p> <p>12 A. I think that's a reasonable conclusion.</p> <p>13 Q. (BY MR. EWALT) Was Dynamic Allocation an</p> <p>14 improvement over the Waterfall?</p> <p>15 A. Enabling real-time bidding of that kind was,</p> <p>16 I believe, a potential improvement over the Waterfall.</p> <p>17 Q. Did Dynamic Allocation help publishers make</p> <p>18 more money than they could make under the Waterfall?</p> <p>19 MS. YOUNG: Objection; form.</p> <p>20 A. I believe that they did help some publishers</p> <p>21 make more money than they could under the Waterfall.</p> <p>22 Q. (BY MR. EWALT) When Dynamic Allocation</p> <p>23 launched, were ad exchanges competing against each</p> <p>24 other in real time?</p> <p>25 A. No, they were not.</p>	<p>1 was anticompetitive for Google to have not modified</p> <p>2 Dynamic Allocation so that bids from rival non-AdX</p> <p>3 exchanges could compete in real time against AdX?</p> <p>4 MS. YOUNG: Objection; form.</p> <p>5 A. That wasn't my opinion.</p> <p>6 Q. (BY MR. EWALT) Did Header Bidding allow</p> <p>7 participating ad exchanges to compete against each</p> <p>8 other in real time?</p> <p>9 A. Header Bidding enabled -- enabled publishers</p> <p>10 to solicit real-time bids from multiple exchangers, so</p> <p>11 enabled that competition.</p> <p>12 Q. Did publisher start to experiment with Header</p> <p>13 Bidding around 2014?</p> <p>14 A. Yes.</p> <p>15 MS. YOUNG: Objection; form.</p> <p>16 Go ahead.</p> <p>17 A. Yes.</p> <p>18 Q. (BY MR. EWALT) Did Google modify Dynamic</p> <p>19 Allocation once publishers started to experiment with</p> <p>20 Header Bidding?</p> <p>21 A. Not initially, no.</p> <p>22 Q. What is your understanding of the term "Last</p> <p>23 Look"?</p> <p>24 A. My understanding of the term "Last Look" is</p> <p>25 that after DFP has received bids from Header Bidding,</p>
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<p>1 Q. When did ad exchanges start competing against</p> <p>2 each other in real time?</p> <p>3 A. I'm not sure that they ever did.</p> <p>4 Q. Okay. So is it your understanding that ad</p> <p>5 exchanges do not compete against in each other in real</p> <p>6 time today?</p> <p>7 A. I -- sorry. Let me correct.</p> <p>8 I thought you said "ad networks."</p> <p>9 Q. Oh.</p> <p>10 A. Could you repeat that question again?</p> <p>11 Q. I might have misspoken. I'll --</p> <p>12 A. No, I just -- no, that's what I heard so...</p> <p>13 Q. Okay. When did ad exchanges start competing</p> <p>14 against each other in real time?</p> <p>15 A. I don't know the precise timing of entry of</p> <p>16 all of the ad exchanges, so I don't have a date for</p> <p>17 you for that.</p> <p>18 Q. Does early 2010 sound about right?</p> <p>19 A. That does sound about right.</p> <p>20 Q. Did Google modify Dynamic Allocation once ad</p> <p>21 exchanges started competing against each other in real</p> <p>22 time?</p> <p>23 MS. YOUNG: Objection; form.</p> <p>24 A. I cannot recall at the moment.</p> <p>25 Q. (BY MR. EWALT) Is it your view that it -- it</p>	<p>1 that prior to soliciting those bids, or in this case</p> <p>2 offers of inventory and floors to -- to AdX, they are</p> <p>3 able to decide their own bid by for AdX.</p> <p>4 Q. Did Last Look emerge from the interaction</p> <p>5 between Dynamic Allocation and Header Bidding?</p> <p>6 A. Last Look emerged primarily from -- from</p> <p>7 Dynamic Allocation, but it was a thing that was made</p> <p>8 apparent competitively through Header Bidding.</p> <p>9 Q. Was Last Look a product feature that Google</p> <p>10 designed?</p> <p>11 MS. YOUNG: Objection; form.</p> <p>12 A. No, Last Look was a -- a -- a constraint that</p> <p>13 arose out of the way Dynamic Allocation was set up and</p> <p>14 Google's choices with regard to which exchange got the</p> <p>15 Last Look.</p> <p>16 Q. (BY MR. EWALT) And it was also a consequence</p> <p>17 of the way that publishers chose to use Header</p> <p>18 Bidding, correct?</p> <p>19 MS. YOUNG: Objection; form.</p> <p>20 A. Publishers only had only a certain set of</p> <p>21 choices they could engage in because of being forced</p> <p>22 to -- to utilize an approach such as Header Bidding.</p> <p>23 And so those things interacted with one another.</p> <p>24 Q. (BY MR. EWALT) If there had been no Header</p> <p>25 Bidding, could there have been a Last Look?</p>

50 (Pages 194 - 197)



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<p style="text-align: right;">Page 198</p> <p>1 MS. YOUNG: Objection; form.</p> <p>2 A. I think in terms of the competitive</p> <p>3 consequences of Last Look, it wouldn't have been an</p> <p>4 issue if there had been no Header Bidding.</p> <p>5 Q. (BY MR. EWALT) After publishers started</p> <p>6 experimenting with Header Bidding, was it</p> <p>7 anticompetitive for Google not to modify bids --</p> <p>8 excuse me, let me start over.</p> <p>9 After publishers started experimenting with</p> <p>10 Header Bidding, was it anticompetitive for Google not</p> <p>11 to modify DFP so that bids from rival exchanges could</p> <p>12 compete in real time against AdX bids?</p> <p>13 MS. YOUNG: Objection; form.</p> <p>14 A. My analysis was that had ad server market</p> <p>15 been a competitive market and Google not been</p> <p>16 integrated into an exchange, that in that scenario, in</p> <p>17 setting who it was that received -- which exchange</p> <p>18 received the Last Look, Google would not have</p> <p>19 necessarily selected its own exchange and may have</p> <p>20 indeed allowed publishers to selected that exchange.</p> <p>21 Q. (BY MR. EWALT) So is that a way of saying</p> <p>22 your -- in your counterfactual world Google was not</p> <p>23 vertically integrated and did not have monopoly power?</p> <p>24 A. That's correct.</p> <p>25 Q. Why did you pick that as your counterfactual</p>	<p style="text-align: right;">Page 200</p> <p>1 MS. YOUNG: Objection; form.</p> <p>2 A. So in evaluating anticompetitive conduct and</p> <p>3 whether conduct is anticompetitive, the process that I</p> <p>4 outlined is the way to go.</p> <p>5 It is also the case that in conducting</p> <p>6 that analysis, you want to understand potentially what</p> <p>7 would have occurred in a competitive market.</p> <p>8 One way of doing so is to consider what</p> <p>9 effect the conduct was more broadly having on and off,</p> <p>10 as you just suggested.</p> <p>11 Q. (BY MR. EWALT) So what I'm understanding your</p> <p>12 analysis to do is to investigate the difference that</p> <p>13 it makes as to whether Google was vertically</p> <p>14 integrated and it had monopoly power; is that right?</p> <p>15 A. It -- when I'm looking for anticompetitive</p> <p>16 effect, it's primarily on the monopoly power side.</p> <p>17 So to -- did Google have monopoly power</p> <p>18 or not have monopoly power? It is the counterfactual.</p> <p>19 Q. I see.</p> <p>20 A. The vertical integration plays a role in that</p> <p>21 analysis.</p> <p>22 Q. Okay. So if I understand this, then, your</p> <p>23 counterfactual world is one where Google is vertically</p> <p>24 integrated but does not have monopoly power and</p> <p>25 your -- and you compare that world to one in which</p>
<p style="text-align: right;">Page 199</p> <p>1 world?</p> <p>2 A. Well, that is the way to consider these</p> <p>3 counterfactual worlds is if -- well, there's --</p> <p>4 there's a couple of ways to it, but the general way to</p> <p>5 do it is -- for these competitive -- anticompetitive</p> <p>6 conduct cases is to assure that the firm engaging in</p> <p>7 the conduct did not have market power in the market</p> <p>8 for which the conduct was being imposed and then build</p> <p>9 the analysis on top of that.</p> <p>10 Q. Couldn't another counterfactual world be one</p> <p>11 where the firm existed in the same state yet simply</p> <p>12 did not engage in the conduct that you're</p> <p>13 investigating?</p> <p>14 MS. YOUNG: Objection; form.</p> <p>15 A. That's not the way as I outlined earlier and</p> <p>16 how I evaluate these things that I conduct my</p> <p>17 analysis.</p> <p>18 Q. (BY MR. EWALT) Is that -- would it be an</p> <p>19 inappropriate economic analysis to investigate --</p> <p>20 strike that.</p> <p>21 Would it be an inappropriate economic analysis</p> <p>22 to evaluate whether conduct is anticompetitive by</p> <p>23 comparing the world with the conduct occurring to a</p> <p>24 counterfactual world in which the conduct did not</p> <p>25 occur but no other changes existed?</p>	<p style="text-align: right;">Page 201</p> <p>1 Google is both vertically integrated and has monopoly</p> <p>2 power?</p> <p>3 A. Yes.</p> <p>4 Q. And how does that help you evaluate whether</p> <p>5 particular conduct is anticompetitive?</p> <p>6 A. Well, it depends on the conduct.</p> <p>7 For instance, in a world where Google</p> <p>8 has no monopoly power, if there is a -- if it would</p> <p>9 have still engaged in the conduct, one could not say</p> <p>10 or conclude that the conduct was itself</p> <p>11 anticompetitive.</p> <p>12 MR. EWALT: Let's go off the record and</p> <p>13 take a --</p> <p>14 THE VIDEOGRAPHER: Now going off the</p> <p>15 record. The time is approximately 3:38.</p> <p>16 (Break from 3:38 p.m. to 4:09 p.m.)</p> <p>17 THE VIDEOGRAPHER: Back on the record.</p> <p>18 The time is approximately 4:09.</p> <p>19 Q. (BY MR. EWALT) Professor Gans, when</p> <p>20 evaluating whether Google's conduct was</p> <p>21 anticompetitive, did you compare outcomes in the</p> <p>22 actual world to outcomes in a counterfactual world?</p> <p>23 MS. YOUNG: Objection; form.</p> <p>24 A. Yes.</p> <p>25 Q. (BY MR. EWALT) In your counterfactual world,</p>

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<p>1 was Google vertically integrated?</p> <p>2 A. In -- in my analysis, depending on the</p> <p>3 conduct I was looking at because some of that conduct</p> <p>4 involved market power across -- with two markets, I</p> <p>5 sometimes had Google vertically integrated and</p> <p>6 sometimes -- or depending on the -- I think actually I</p> <p>7 would have to answer this with respect to a specific</p> <p>8 conduct.</p> <p>9 Q. Okay. When you were evaluating tying, did</p> <p>10 you use a counterfactual world in which Google was</p> <p>11 vertically integrated?</p> <p>12 MS. YOUNG: Objection; form.</p> <p>13 A. Yes.</p> <p>14 Q. (BY MR. EWALT) When you were evaluating UPR,</p> <p>15 did you use a counterfactual world in which Google was</p> <p>16 vertically integrated?</p> <p>17 A. Both yes, and also considering one where it</p> <p>18 wasn't.</p> <p>19 Q. When you were evaluating Dynamic Allocation,</p> <p>20 did you consider a counterfactual world in which</p> <p>21 Google was vertically integrated?</p> <p>22 MS. YOUNG: Objection; form.</p> <p>23 A. When I was analyzing Google's implementation</p> <p>24 of Dynamic Allocation, like with the previous one, it</p> <p>25 was both.</p>	<p>1 "no."</p> <p>2 A. Okay.</p> <p>3 Q. When you were considering whether Dynamic</p> <p>4 Allocation and Bernanke --</p> <p>5 A. You mean DRS.?</p> <p>6 Q. Yes. Thank you.</p> <p>7 When you were considering whether</p> <p>8 Dynamic Revenue Share or Bernanke were</p> <p>9 anticompetitive, did your -- did you assume that in</p> <p>10 your counterfactual world Google was vertically</p> <p>11 integrated?</p> <p>12 MS. YOUNG: Objection; form.</p> <p>13 A. I -- I assume I -- the analysis would be the</p> <p>14 same, whether they were vertically integrated or not.</p> <p>15 So count that as assume they're</p> <p>16 vertically integrated.</p> <p>17 Q. (BY MR. EWALT) Okay. When you were</p> <p>18 evaluating whether Google's conduct was</p> <p>19 anticompetitive, in your counterfactual world did you</p> <p>20 assume that Google did not have monopoly power?</p> <p>21 MS. YOUNG: Objection; form.</p> <p>22 A. Yes, in --</p> <p>23 MS. YOUNG: Objection; form.</p> <p>24 You may answer.</p> <p>25 A. Yes, in the market for which the conduct</p>
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<p>1 Q. (BY MR. EWALT) And how about enhanced Dynamic</p> <p>2 Allocation?</p> <p>3 When you were considering that did you</p> <p>4 consider --</p> <p>5 A. The same answer, yes.</p> <p>6 MS. YOUNG: Let him finish his question</p> <p>7 before you answer.</p> <p>8 Q. (BY MR. EWALT) Did you use the same</p> <p>9 counterfactual for all of the other conducts, other</p> <p>10 than tying?</p> <p>11 MS. YOUNG: Objection; form.</p> <p>12 A. Sorry, let me now work my way through it.</p> <p>13 For the analysis of Project Bernanke and</p> <p>14 the analysis of Dynamic Revenue Sharing, I did not --</p> <p>15 I considered what would happen without Google having</p> <p>16 market power, monopoly power in the requisite market</p> <p>17 but not -- but assume they were still vertically</p> <p>18 integrated.</p> <p>19 Q. (BY MR. EWALT) Did you assume they were not</p> <p>20 vertically integrated in the counterfactual world?</p> <p>21 MS. YOUNG: Objection; form.</p> <p>22 A. Not in the -- not for -- I did not need to do</p> <p>23 that for Dynamic Allocation -- Dynamic -- DRS and for</p> <p>24 Bernanke.</p> <p>25 Q. (BY MR. EWALT) Okay. I just need a "yes" or</p>	<p>1 originated.</p> <p>2 Q. (BY MR. EWALT) Okay. And is that answer the</p> <p>3 same with respect to all of the conduct that you</p> <p>4 evaluated in your reports?</p> <p>5 A. Yes.</p> <p>6 MS. YOUNG: Objection; form.</p> <p>7 A. Oh. Yes.</p> <p>8 Q. (BY MR. EWALT) Okay. In either of your</p> <p>9 reports did you express an opinion about the overall</p> <p>10 net effect of UPR considering all the effects on both</p> <p>11 advertisers and publishers?</p> <p>12 MS. YOUNG: Objection; form.</p> <p>13 A. No, I only engaged in an analysis of whether</p> <p>14 it was anticompetitive with respect to the -- the</p> <p>15 methodology -- the method I've already outlined.</p> <p>16 Q. (BY MR. EWALT) In either of your reports did</p> <p>17 you express an opinion about the overall net effect of</p> <p>18 Dynamic Allocation considering all of the effects on</p> <p>19 both advertisers and publishers?</p> <p>20 MS. YOUNG: Objection; form.</p> <p>21 A. No. I didn't analyze a world with or without</p> <p>22 Dynamic Allocation. Just a world with or without</p> <p>23 Google's particular implementation of Dynamic</p> <p>24 Allocation.</p> <p>25 Q. (BY MR. EWALT) In either of your reports did</p>

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<p style="text-align: right;">Page 206</p> <p>1 you express an opinion about the overall net effect of</p> <p>2 Enhanced Dynamic Allocation considering all the</p> <p>3 effects on both advertisers and publishers?</p> <p>4 MS. YOUNG: Objection; form.</p> <p>5 A. No, I only considered the effects of Google's</p> <p>6 implementation of Enhanced Dynamic Allocation compared</p> <p>7 to a counterfactual where it didn't implement it in</p> <p>8 that way.</p> <p>9 Q. (BY MR. EWALT) In either of your reports did</p> <p>10 you express an opinion about the overall net effect of</p> <p>11 line item capping considering all the effects on both</p> <p>12 advertisers and publishers?</p> <p>13 MS. YOUNG: Objection; form.</p> <p>14 A. As before, I considered the impact of line</p> <p>15 item capping in a world with or without Google having</p> <p>16 market power in -- in -- in publisher ad servers.</p> <p>17 Q. (BY MR. EWALT) So is it fair to say that you</p> <p>18 did not express an opinion in your reports about the</p> <p>19 overall net effect of line item capping considering</p> <p>20 all the effects on both advertisers and publishers?</p> <p>21 MS. YOUNG: Objection; form.</p> <p>22 A. My analysis only concerned the impact on the</p> <p>23 competition in ad exchangers as a result of Google's</p> <p>24 line item capping, which itself has effects on both</p> <p>25 advertisers and publishers.</p>	<p style="text-align: right;">Page 208</p> <p>1 Q. Is it your opinion -- did you -- do you have</p> <p>2 an -- strike all that.</p> <p>3 In your opinion, did Bernanke harm</p> <p>4 competition in the market for ad exchanges?</p> <p>5 MS. YOUNG: Objection; form.</p> <p>6 A. My opinion is that it -- yes, it harmed</p> <p>7 competition in the market for ad exchangers.</p> <p>8 Q. (BY MR. EWALT) Okay. Have you expressed any</p> <p>9 opinion in your reports about how enhanced Dynamic</p> <p>10 Allocation affected competition in any market other</p> <p>11 than the market for ad exchanges?</p> <p>12 MS. YOUNG: Objection; form.</p> <p>13 A. That was just a market for ad exchanges.</p> <p>14 Q. (BY MR. EWALT) Does Enhanced Dynamic</p> <p>15 Allocation allow ad exchanges to compete for</p> <p>16 impressions that otherwise would be allocated to</p> <p>17 Direct Deals?</p> <p>18 MS. YOUNG: Objection; form.</p> <p>19 A. Enhanced Dynamic Allocation allows for</p> <p>20 additional functionality with respect to programatic</p> <p>21 advertising, programatic guarantees for -- for -- for</p> <p>22 publishers.</p> <p>23 So I -- I think the word "compete" is an</p> <p>24 odd one. I would think it allows publishers</p> <p>25 additional functionality to manage their programatic</p>
<p style="text-align: right;">Page 207</p> <p>1 Q. (BY MR. EWALT) In either of your reports, did</p> <p>2 you express an opinion about the overall net effect of</p> <p>3 Bernanke considering all the effects on both</p> <p>4 advertisers and publishers?</p> <p>5 MS. YOUNG: Objection; form.</p> <p>6 A. I considered the impact of Bernanke on -- on</p> <p>7 competition -- on -- on competition in the ad server</p> <p>8 market, and, with respect to that, all of its</p> <p>9 consequences on -- on customers who interacted with</p> <p>10 that market.</p> <p>11 Q. (BY MR. EWALT) I'm sorry, did you say that</p> <p>12 with respect to Bernanke you considered impacts on --</p> <p>13 A. Yes.</p> <p>14 Q. -- on the ad server market?</p> <p>15 A. On the ad exchange market. If I said "ad</p> <p>16 server," I meant ad exchange market. That was</p> <p>17 Bernanke.</p> <p>18 Q. That was Bernanke.</p> <p>19 A. I meant the Bernanke on the -- I'm sorry.</p> <p>20 Q. Take your time. Take your time.</p> <p>21 A. I meant the market for buy side ad tools for</p> <p>22 small advertisers.</p> <p>23 Q. Okay.</p> <p>24 A. And, also, that considered the impact on</p> <p>25 publishers as well.</p>	<p style="text-align: right;">Page 209</p> <p>1 and nonprogramatic advertising.</p> <p>2 Q. (BY MR. EWALT) Is it your opinion that</p> <p>3 Dynamic -- that Enhanced Dynamic Allocation harms</p> <p>4 competition in the ad exchange market?</p> <p>5 A. No. I did no analysis for further Enhanced</p> <p>6 Dynamic Allocation harmed competition in any market.</p> <p>7 I only examined Google's implementation</p> <p>8 of Enhanced Dynamic Allocation and whether it harmed</p> <p>9 competition.</p> <p>10 Q. So are you distinguishing between Enhanced</p> <p>11 Dynamic Allocation and Google's implementation of</p> <p>12 Enhanced Dynamic Allocation?</p> <p>13 A. Oh, I think that is very clear in my report.</p> <p>14 Q. Wasn't clear to me.</p> <p>15 What's the difference between --</p> <p>16 MS. YOUNG: And I'm going to --</p> <p>17 Q. (BY MR. EWALT) -- Enhanced Dynamic Allocation</p> <p>18 and Google's implementation of Enhanced Dynamic</p> <p>19 Allocation?</p> <p>20 MS. YOUNG: I'm going to move to strike</p> <p>21 everything before the question.</p> <p>22 Go ahead and answer.</p> <p>23 A. Well, this is -- the -- as I have said very</p> <p>24 clearly in my report, when Google implemented Dynamic</p> <p>25 Allocation and also as that carried on to Enhanced</p>

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<p>1 Dynamic Allocation, Google had to make a decision as</p> <p>2 to who received -- which exchange received First Look</p> <p>3 or Last Look in the process of implementing that.</p> <p>4 Its decision was that its own exchange</p> <p>5 would receive the Last Look advantage. And that was</p> <p>6 the particular implementation that I analyzed as to</p> <p>7 whether -- had Google had a competitive ad server</p> <p>8 market or faced a competitive ad server market,</p> <p>9 whether they would have made such a decision.</p> <p>10 Q. (BY MR. EWALT) Was there any implementation</p> <p>11 of Dynamic Allocation other than the implementation</p> <p>12 that Google did?</p> <p>13 A. Conceptually, of course.</p> <p>14 Q. In the real world, because you're evaluating</p> <p>15 the effects of the actual conduct, right?</p> <p>16 A. Yeah. They had market power. They had</p> <p>17 monopoly power. I'm -- I don't think anyone's</p> <p>18 surprised that they would do that in their own</p> <p>19 interest and not believe that there is any other way.</p> <p>20 However, if you imagine a counterfactual</p> <p>21 world in which they were just running ad servers in</p> <p>22 competition with other ad servers, different things</p> <p>23 would have happened.</p> <p>24 Q. So are you disputing -- let me strike that.</p> <p>25 Am I understanding you correctly that</p>	<p>1 Q. Well, but you just testified that there's a</p> <p>2 difference between evaluating the conducts and</p> <p>3 evaluating the implementations of the conducts.</p> <p>4 MS. YOUNG: Objection; form.</p> <p>5 Q. (BY MR. EWALT) So I'm really just struggling</p> <p>6 here with what did you evaluate?</p> <p>7 MS. YOUNG: I'm going to -- there's no</p> <p>8 question pending. I'm going to move to strike.</p> <p>9 Q. (BY MR. EWALT) Did you evaluate --</p> <p>10 MR. EWALT: He's -- the record is clear</p> <p>11 that -- what I've asked, and the record is very clear</p> <p>12 what he said. And he's changing every time I ask a</p> <p>13 question what he evaluated and what he didn't</p> <p>14 evaluate.</p> <p>15 MS. YOUNG: There's no question pending.</p> <p>16 I move to strike.</p> <p>17 There's no question pending.</p> <p>18 Go ahead. Ask a question, Counsel.</p> <p>19 A. Can you repeat the last question to me.</p> <p>20 Q. (BY MR. EWALT) I'm going to ask a new</p> <p>21 question.</p> <p>22 Please identify every type of Google conduct</p> <p>23 for which you have reached an opinion that such</p> <p>24 conduct was anticompetitive in any market?</p> <p>25 A. Let me, so that I get this right, find the</p>
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<p>1 you did not evaluate Dynamic Allocation generally?</p> <p>2 MS. YOUNG: Objection; form.</p> <p>3 A. The existence or not of Dynamic Allocation</p> <p>4 was not a conduct that I evaluated.</p> <p>5 Q. (BY MR. EWALT) Did you --</p> <p>6 MS. YOUNG: Are you finished answering</p> <p>7 your question?</p> <p>8 THE WITNESS: Yes.</p> <p>9 MS. YOUNG: Okay.</p> <p>10 Q. (BY MR. EWALT) Did you evaluate the existence</p> <p>11 of Enhanced Dynamic Allocation?</p> <p>12 A. The existence of Dynamic -- of Enhanced</p> <p>13 Dynamic Allocation or not, or the enhanced part of</p> <p>14 Dynamic Allocation versus Dynamic Allocation, was not</p> <p>15 a conduct that I evaluated.</p> <p>16 Q. Did you evaluate the existence of UPR?</p> <p>17 A. I evaluated the existence of UPR in a world</p> <p>18 where UPR was not imposed. That is, as it was prior</p> <p>19 to the imposing of UPR.</p> <p>20 Q. So your answer for UPR was a little bit</p> <p>21 different than the answer for Enhanced Dynamic</p> <p>22 Allocation and Dynamic Allocation.</p> <p>23 A. It's no different. If you look in my report,</p> <p>24 both of them, I'm very clear on the conducts that I am</p> <p>25 evaluating and looking at.</p>	<p>1 most convenient summary in my statements of these</p> <p>2 things. And probably the easiest is to go conduct by</p> <p>3 conduct.</p> <p>4 Did we want to start with tying?</p> <p>5 Q. Please identify every type of conduct Google</p> <p>6 engaged for which you have reached an opinion that</p> <p>7 such conduct was anticompetitive in any market.</p> <p>8 A. Okay. Because you're having trouble</p> <p>9 distinguishing between conduct and projects, I'm going</p> <p>10 to do this and be very plain about it.</p> <p>11 First, Google's tying conduct, there was</p> <p>12 the conduct by which it tied its AdX product to its</p> <p>13 publisher ad server product in various ways that we've</p> <p>14 already discussed.</p> <p>15 Second, UPR. UPR was a restriction on</p> <p>16 how publishers could engage in setting differential</p> <p>17 price floors within the context of Google's ad</p> <p>18 server -- ad publisher ad server product. The conduct</p> <p>19 was the imposition of UPR. Not having the conduct was</p> <p>20 not having UPR.</p> <p>21 With respect to conducts, so that I'm</p> <p>22 clear, are associated with Dynamic Allocation.</p> <p>23 Dynamic Allocation itself was a program which allowed</p> <p>24 for real-time bidding to be done, which was an</p> <p>25 evolution over the Waterfall. That is not the conduct</p>

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<p>1 that I evaluate.</p> <p>2 The conduct was when it implemented</p> <p>3 Dynamic Allocation -- and you can see this in 570 on</p> <p>4 my opening report -- they overrode any publishers --</p> <p>5 they -- they made a choice that AdX would have a Last</p> <p>6 Look, that AdX would have a Last Look in that.</p> <p>7 And they did the same thing with</p> <p>8 Enhanced Dynamic Allocation. That was its</p> <p>9 implementation, and its implementation was the conduct</p> <p>10 that I analyzed.</p> <p>11 Just to be clear, if Google did not own</p> <p>12 AdX, one can imagine that it could integrate with a</p> <p>13 non-Google exchange.</p> <p>14 AdX, not owned by Google or any other</p> <p>15 non-Google exchange, to give that Last Look.</p> <p>16 And it could have, depending on choices</p> <p>17 and other competitive positioning, given that choice</p> <p>18 of who gets the Last Look to the publisher who's the</p> <p>19 customer of the ad server.</p> <p>20 Let's continue on.</p> <p>21 Google engaged in conduct that capped</p> <p>22 line items in the publisher ad server. The conduct is</p> <p>23 the cap. Not having the conduct would have no cap.</p> <p>24 Google redacted data. It redacted data</p> <p>25 in its ad server products. Had it not -- that was the</p>	<p>1 Those are the conducts I evaluated.</p> <p>2 Q. Thank you very much. That was helpful.</p> <p>3 So let's talk about DA and EDA again.</p> <p>4 DA first.</p> <p>5 So in -- if I understand this correctly,</p> <p>6 you did not investigate whether DA in and of itself</p> <p>7 harmed competition in the ad exchange market; is that</p> <p>8 right?</p> <p>9 MS. YOUNG: Objection; form.</p> <p>10 A. That is right. I investigated the</p> <p>11 implementation of DA that Google chose versus other</p> <p>12 implementations it might have chosen.</p> <p>13 Q. (BY MR. EWALT) And you reached the conclusion</p> <p>14 that Google harmed competition by implementing DA in</p> <p>15 such a way that AdX received a Last Look.</p> <p>16 Is that fair?</p> <p>17 A. It -- it did because -- but it was able to</p> <p>18 favor its own vertically integrated ad exchange via</p> <p>19 that choice, which had it not had market power in the</p> <p>20 ad server market, it wouldn't have played out that</p> <p>21 way.</p> <p>22 Q. If Google had implemented Dynamic Allocation</p> <p>23 in such a way that a different exchange received the</p> <p>24 Last Look, would that have harmed competition?</p> <p>25 MS. YOUNG: Objection; form.</p>
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<p>1 conduct, the redaction. Not -- not redacting would be</p> <p>2 not doing the conduct.</p> <p>3 With Bernanke, there were two versions</p> <p>4 of Bernanke. There was an initial version of Bernanke</p> <p>5 by which Google lowered the take rate on some -- some</p> <p>6 advertiser -- some advertiser transactions in order to</p> <p>7 see them more likely to pass through Google's stack.</p> <p>8 The second prong of Bernanke was to bank</p> <p>9 and claw back through higher take rates. It's</p> <p>10 calculated loss -- and I'm putting that in quotes, I</p> <p>11 don't know how to say it any other way -- from that.</p> <p>12 The conduct that I analyzed is the</p> <p>13 conduct of Google engaging in the high increase in</p> <p>14 take rate to advertisers as compared to the conduct</p> <p>15 that just involved the decrease in take rate prong of</p> <p>16 Bernanke.</p> <p>17 Similarly, with Dynamic Revenue Sharing</p> <p>18 also had those two prongs.</p> <p>19 And the conduct that I investigated was</p> <p>20 the conduct with the first prong that allowed AdX's</p> <p>21 take rate to be lower for some transactions as</p> <p>22 compared to a world with the second prong where AdX --</p> <p>23 where -- where Google increased the take rate on</p> <p>24 certain transactions and did so with a view to clawing</p> <p>25 back the losses on the first prong.</p>	<p>1 A. If a different exchange that was not owned by</p> <p>2 Google had received the Last Look and that was just an</p> <p>3 independent choice of Google, then that would not have</p> <p>4 harmed competition.</p> <p>5 Q. (BY MR. EWALT) With respect to EDA, I believe</p> <p>6 you said that you did not reach an opinion that EDA</p> <p>7 harmed competition on its own.</p> <p>8 Is that fair?</p> <p>9 A. That is correct.</p> <p>10 Q. You did reach a conclusion that the way that</p> <p>11 Google implemented EDA harmed competition; is that</p> <p>12 right?</p> <p>13 A. I did. It was a continuation of the way they</p> <p>14 had implemented DA.</p> <p>15 Q. Is there anything different about the</p> <p>16 implementation of EDA as compared to the</p> <p>17 implementation of DA that affected your evaluation as</p> <p>18 to whether EDA harmed competition?</p> <p>19 MS. YOUNG: Objection; form.</p> <p>20 A. No.</p> <p>21 Q. (BY MR. EWALT) Talk about Bernanke next.</p> <p>22 Am I correct -- well, you -- you talked about</p> <p>23 there are two prongs for Bernanke, right?</p> <p>24 A. Yes.</p> <p>25 Q. Did you reach a conclusion as to whether</p>

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<p>1 Bermanke with both prongs harmed competition?</p> <p>2 A. Relative to Bermanke with no Bermanke at all?</p> <p>3 Q. Yes.</p> <p>4 A. I did not reach a conclusion on that.</p> <p>5 Q. With respect to DRS, you also said there were</p> <p>6 two prongs.</p> <p>7 Did you reach a conclusion as to whether</p> <p>8 DRS with two prongs harmed competition relative to a</p> <p>9 world with no DRS?</p> <p>10 A. I --</p> <p>11 MS. YOUNG: Objection; form.</p> <p>12 Go ahead.</p> <p>13 A. I did not.</p> <p>14 Q. (BY MR. EWALT) Now, there were actually three</p> <p>15 versions of DRS.</p> <p>16 Do you remember that?</p> <p>17 A. Yes, there was this final truthful DRS which</p> <p>18 retains both of the prongs of DRS Version 2.</p> <p>19 Q. Did you reach any conclusion as to whether</p> <p>20 truthful DRS harmed competition?</p> <p>21 A. Yes. Relative to DRS Version 1.</p> <p>22 Q. Okay. Could you turn to Paragraph 738 of</p> <p>23 your opening report, please?</p> <p>24 Could you please review that, and let me</p> <p>25 know when you've finished.</p>	<p>1 due to high publisher floor prices?</p> <p>2 MS. YOUNG: Objection; form.</p> <p>3 A. It developed Bermanke to sell impressions</p> <p>4 that otherwise would have not been sold due to high</p> <p>5 publisher floor prices on AdX.</p> <p>6 Q. (BY MR. EWALT) Would you please turn to</p> <p>7 Paragraph 740 to 743 of your opening report.</p> <p>8 A. Yes.</p> <p>9 Q. And in those paragraphs you describe three</p> <p>10 scenarios where Bermanke could impact AdX auctions?</p> <p>11 A. Yes.</p> <p>12 Q. The first scenario is when Google Ads submits</p> <p>13 the highest and second highest bids into the AdX</p> <p>14 auction, right?</p> <p>15 A. Yes.</p> <p>16 Q. In that first scenario, does Bermanke have</p> <p>17 any effect on rival ad-buying tools?</p> <p>18 A. No.</p> <p>19 Q. Second scenario is when no buyer submits a</p> <p>20 bid above the AdX floor price without Bermanke, but</p> <p>21 Bermanke allows Google Ads to bid above the floor</p> <p>22 price and win the impression.</p> <p>23 Is that fair?</p> <p>24 A. Yes.</p> <p>25 Q. In the second scenario, does Bermanke have</p>
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<p>1 A. Yes.</p> <p>2 [REDACTED]</p> <p>3 [REDACTED]</p> <p>4 [REDACTED]</p> <p>5 [REDACTED]</p> <p>6 [REDACTED]</p> <p>7 [REDACTED]</p> <p>8 [REDACTED]</p> <p>9 [REDACTED]</p> <p>10 [REDACTED]</p> <p>11 [REDACTED]</p> <p>12 [REDACTED]</p> <p>13 Q. (BY MR. EWALT) Did Google develop Bermanke so</p> <p>14 that Google Ads could clear more impressions on AdX,</p> <p>15 specifically those impressions that Google Ads would</p> <p>16 have lost due to high publisher floor prices?</p> <p>17 MS. YOUNG: Objection; form.</p> <p>18 A. Yes, that's what it said it was trying to do.</p> <p>19 Q. (BY MR. EWALT) Did Google develop Bermanke to</p> <p>20 improve the match rate on AdX?</p> <p>21 A. It was trying to improve and increase the</p> <p>22 number of transactions going through AdX as compared</p> <p>23 to elsewhere.</p> <p>24 Q. Did Google develop Bermanke to help sell</p> <p>25 impressions that otherwise would not have been sold</p>	<p>1 any effect on rival ad-buying tools?</p> <p>2 A. No.</p> <p>3 Q. In the second scenario, does Bermanke allow</p> <p>4 transactions to clear that otherwise would not have</p> <p>5 cleared?</p> <p>6 A. Yes.</p> <p>7 Q. In the second scenario, does Bermanke expand</p> <p>8 the output of transactions?</p> <p>9 MS. YOUNG: Objection; form.</p> <p>10 Go ahead.</p> <p>11 A. Yes.</p> <p>12 Q. (BY MR. EWALT) Do publishers and advertisers</p> <p>13 benefit from Bermanke expanding output in the second</p> <p>14 scenario?</p> <p>15 MS. YOUNG: Objection; form.</p> <p>16 A. Well, Google is lowering its price so that</p> <p>17 they potentially benefit.</p> <p>18 Q. (BY MR. EWALT) The third scenario is when a</p> <p>19 rival buying tool would have won the impression</p> <p>20 without Bermanke but Bermanke allows Google Ads to win</p> <p>21 instead; is that right?</p> <p>22 A. That's right.</p> <p>23 Q. And this third scenario is the only one where</p> <p>24 Bermanke could harm rival buying tools.</p> <p>25 Is that fair?</p>

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<p>1 A. That is --</p> <p>2 MS. YOUNG: Objection; form.</p> <p>3 Go ahead.</p> <p>4 A. That is correct.</p> <p>5 Q. (BY MR. EWALT) Some of those rival buying</p> <p>6 tools are buying tools for large advertisers, right?</p> <p>7 MS. YOUNG: Objection; form.</p> <p>8 A. It's possible.</p> <p>9 Q. (BY MR. EWALT) In your reports, do you</p> <p>10 express an opinion on how commonly each of the three</p> <p>11 scenarios occurred?</p> <p>12 MS. YOUNG: Objection; form.</p> <p>13 A. I do not.</p> <p>14 Q. (BY MR. EWALT) Do you know whether the second</p> <p>15 scenario is more common than the third scenario?</p> <p>16 MS. YOUNG: Objection; form.</p> <p>17 A. I do not know the distribution of the</p> <p>18 scenarios.</p> <p>19 (Marked Gans Exhibit No. 9.)</p> <p>20 Q. (BY MR. EWALT) I'm handing you a document</p> <p>21 that's been marked as Exhibit 9. First page bears</p> <p>22 Bates No. GOOG-DOJ-AT-02513569.</p> <p>23 Do you see that?</p> <p>24 A. Yes.</p> <p>25 Q. I would like to direct your attention to</p>	<p>1 [REDACTED]</p> <p>2 [REDACTED]</p> <p>3 [REDACTED]</p> <p>4 [REDACTED]</p> <p>5 [REDACTED]</p> <p>6 [REDACTED]</p> <p>7 [REDACTED]</p> <p>8 Q. Fair. Okay.</p> <p>9 And so can we agree that we'll just call</p> <p>10 it Bernanke Version 1? We can refer to that as</p> <p>11 Bernanke and then we can refer to Global Bernanke</p> <p>12 separately.</p> <p>13 A. Well, it's not Global Bernanke. It's</p> <p>14 Bernanke Version 2, and then Global Bernanke was</p> <p>15 another thing entirely.</p> <p>16 Q. And so --</p> <p>17 A. There was another -- it was another --</p> <p>18 Q. Iteration?</p> <p>19 A. Sorry. Yeah.</p> <p>20 [REDACTED]</p> <p>21 [REDACTED]</p> <p>22 [REDACTED]</p> <p>23 [REDACTED]</p> <p>24 [REDACTED]</p> <p>25 [REDACTED]</p>
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<p>1 Paragraph 746 in your opening report, in particular to</p> <p>2 Footnote 942.</p> <p>3 A. Yes.</p> <p>4 MS. YOUNG: You said 942?</p> <p>5 MR. EWALT: Yes.</p> <p>6 MS. YOUNG: Okay.</p> <p>7 Q. (BY MR. EWALT) Is Exhibit 9 the document you</p> <p>8 cited in Footnote 942 in your opening report?</p> <p>9 A. Yes.</p> <p>10 Q. Did you rely on the page with Bates number</p> <p>11 ending in 573?</p> <p>12 A. I believe so.</p> <p>13 Q. Would you please turn to that page in</p> <p>14 Exhibit 6.</p> <p>15 A. Yes.</p> <p>16 Q. Does Page 573 in Exhibit 6 summarize the</p> <p>17 results of a simulation of Bernanke that was run in</p> <p>18 June 2013?</p> <p>19 A. Yes.</p> <p>20 [REDACTED]</p> <p>21 [REDACTED]</p> <p>22 [REDACTED]</p> <p>23 [REDACTED]</p> <p>24 [REDACTED]</p> <p>25 [REDACTED]</p>	<p>1 [REDACTED]</p> <p>2 [REDACTED]</p> <p>3 [REDACTED]</p> <p>4 [REDACTED]</p> <p>5 [REDACTED]</p> <p>6 [REDACTED]</p> <p>7 [REDACTED]</p> <p>8 [REDACTED]</p> <p>9 [REDACTED]</p> <p>10 [REDACTED]</p> <p>11 [REDACTED]</p> <p>12 [REDACTED]</p> <p>13 [REDACTED]</p> <p>14 [REDACTED]</p> <p>15 [REDACTED]</p> <p>16 [REDACTED]</p> <p>17 [REDACTED]</p> <p>18 [REDACTED]</p> <p>19 [REDACTED]</p> <p>20 [REDACTED]</p> <p>21 [REDACTED]</p> <p>22 [REDACTED]</p> <p>23 [REDACTED]</p> <p>24 [REDACTED]</p> <p>25 [REDACTED]</p>

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<p>1 [REDACTED]</p> <p>2 [REDACTED]</p> <p>3 [REDACTED]</p> <p>4 [REDACTED]</p> <p>5 [REDACTED]</p> <p>6 [REDACTED]</p> <p>7 [REDACTED]</p> <p>8 [REDACTED]</p> <p>9 Q. Okay. So it's an increase in economic surplus.</p> <p>10</p> <p>11 And do advertisers receive some of that surplus?</p> <p>12</p> <p>13 A. Yes.</p> <p>14 Q. Do you publishers receive some of that surplus?</p> <p>15</p> <p>16 A. Yes.</p> <p>17 Q. So is fair to say that Bernanke Version 1 benefitted both advertisers and publishers?</p> <p>18</p> <p>19 MS. YOUNG: Objection; form.</p> <p>20 A. That would be a fair statement.</p> <p>21 Q. (BY MR. EWALT) All right. Could you please turn now to Paragraph 750 of your opening report.</p> <p>22</p> <p>23 (Marked Gans Exhibit No. 10.)</p> <p>24 Q. (BY MR. EWALT) Okay. I'm handing you what's been marked as Exhibit 10. This is a presentation</p>	<p>1 [REDACTED]</p> <p>2 [REDACTED]</p> <p>3 [REDACTED]</p> <p>4 [REDACTED]</p> <p>5 [REDACTED]</p> <p>6 [REDACTED]</p> <p>7 [REDACTED]</p> <p>8 Q. Do you know which version of Bernanke this --</p> <p>9 A. I'll have to remind myself of the -- in this document, I'm sorry, that I don't remember the -- the precise dates off of hand.</p> <p>10</p> <p>11 MS. YOUNG: Professor Gans, take your time to read the document, if you need it, to answer the question.</p> <p>12</p> <p>13 [REDACTED]</p> <p>14 [REDACTED]</p> <p>15 [REDACTED]</p> <p>16 [REDACTED]</p> <p>17 [REDACTED]</p> <p>18 [REDACTED]</p> <p>19 [REDACTED]</p> <p>20 [REDACTED]</p> <p>21 [REDACTED]</p> <p>22 [REDACTED]</p> <p>23 [REDACTED]</p> <p>24 Q. (BY MR. EWALT) Do you know which version of Bernanke was being studied in Exhibit 10?</p> <p>25</p>
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<p>1 that's titled "Project Bernanke Quantitative Easing on the Ad Exchange," and it's dated December 10, 2013.</p> <p>2</p> <p>3 The first page bears Bates No. GOOG-DOJ-28386151.</p> <p>4 Do you see that?</p> <p>5 A. Yes. It's got a picture.</p> <p>6 Q. And directing you to Footnote 947 in your report.</p> <p>7</p> <p>8 A. Yes.</p> <p>9 Q. Is Exhibit 10 the document you cited in Footnote 947?</p> <p>10</p> <p>11 A. Yes.</p> <p>12 Q. And did you rely on the page with Bates number ending in 167?</p> <p>13</p> <p>14 A. Yes.</p> <p>15 Q. Please turn to that page in Exhibit 10.</p> <p>16 A. Okay.</p> <p>17 Q. Does Page 167 in Exhibit 10 summarize the impact of Bernanke Version 1 as of December 2013?</p> <p>18</p> <p>19 A. Yes.</p> <p>20 MS. YOUNG: Objection; form.</p> <p>21 [REDACTED]</p> <p>22 [REDACTED]</p> <p>23 [REDACTED]</p> <p>24 [REDACTED]</p> <p>25 [REDACTED]</p>	<p>1 A. That's a different question.</p> <p>2 My understanding, I may be incorrect about it, this was the full version of Bernanke.</p> <p>3</p> <p>4 Q. Is that different than Version 1?</p> <p>5 A. Yes.</p> <p>6 Q. How is this -- the full version of Bernanke different than Version 1?</p> <p>7</p> <p>8 A. The full version of Bernanke kept a -- a count of the discounts that were given in terms of a lower take rate to advertisers -- to -- to -- the discounts that were given in terms of a lower take rate and puts them as a debt in that account, which it was -- which would be clawed back through an increase in the take rate associated with those accounts.</p> <p>9</p> <p>10 So it had both prongs, as we discussed it earlier.</p> <p>11</p> <p>12 Q. Is it your testimony that Bernanke Version 1 did not have both prongs?</p> <p>13</p> <p>14 A. That's right. Bernanke Version 1 only had the reduction in the take rate.</p> <p>15</p> <p>16 Q. Okay. Now --</p> <p>17 (Speaking simultaneously.)</p> <p>18 A. Or the one in this simulation.</p> <p>19</p> <p>20 Q. (BY MR. EWALT) I ask -- well, I ask you this with all due respect.</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p>

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1 Are you aware that prior to Bernanke there was  
2 a program called buy-side DRS?  
3 A. Yes. I see. Right.  
4 Q. And is buy-side DRS the program that only  
5 reduced the margin but did not have a debt account?  
6 A. Right at the moment I have -- I would have to  
7 review my report again to remember which version was  
8 under which name, which is what I am struggling with  
9 right here.  
10 Q. Okay. So is it possible that Bernanke  
11 Version 1 also had a debt account?  
12 A. I would have -- I would -- I would need some  
13 time to refresh my memory regarding the exhibits and  
14 my report to --  
15 Q. Okay.  
16 A. -- to confirm with certainty.  
17 Q. Okay. Well, let's turn back to Exhibit 10,  
18 Page 167.

[illegible]

3 Q. So according to your Exhibit 10, did Bernanke  
4 benefit both advertisers and publishers?

5 MS. YOUNG: Objection; form.  
6 A. Well, Bernanke wasn't a conduct I evaluated,  
7 as I already mentioned.

8 But in a world with and out -- with and  
9 without Bernanke as in those experiments, one effect  
10 of it was a short-run effect of increasing the revenue  
11 of publishers.

12 Q. (BY MR. EWALT) And advertisers?

13 MS. YOUNG: Objection; form.

14 A. Potentially of advertisers as well.

15 MR. EWALT: Let's go off the record.

16 THE VIDEOGRAPHER: This is now the end  
17 of Video 5 of Joshua Gans. We're off the record. The  
18 time is 4:59.

19 (Break from 4:59 p.m. to 5:18 p.m.)

20 THE VIDEOGRAPHER: Now back on the  
21 record. Video 6 of Joshua Gans. The time is  
22 approximately 5:18.

23 Q. (BY MR. EWALT) Professor Gans, during the  
24 break, did you discuss the substance of this case with  
25 counsel?

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15 Q. And that increase in advertiser spending was  
16 due to Bernanke allowing more matches between  
17 publishers and advertisers increasing output, correct?

18 A. What you're asking me is about -- potentially  
19 about a counterfactual, which was not the  
20 counterfactual I analyzed. It's with and without  
21 Bernanke as in these experiments.

22 But with that caveat, yes.

1 MS. YOUNG: Same instruction as before.  
2 I direct the witness not to answer pursuant to the  
3 expert stipulation entered by the Court in this case.

4 Q. (BY MR. EWALT) Based on the instruction not  
5 to answer, we will move on.

6 Did DRS Version 1 harm competition in any  
7 market?

8 A. I didn't analyze whether it did harm  
9 competition, but my analysis -- yeah. I didn't  
10 analyze whether it did harm competition.

11 Q. Could you please turn to Paragraph 104 of  
12 your rebuttal report.

13 A. Yes.

14 Q. And that paragraph begins: "Professor  
15 Milgrom, however, provides an illustration of why this  
16 approach is not appropriate in this case in his  
17 evaluation of one of the conducts investigated in this  
18 matter, Sell-Side Dynamic Revenue Sharing, or more  
19 specifically DRS v1. He points to a Google evaluation  
20 of the impact of the conduct. [REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED] Recall that I regarded this particular

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<p>1 procedure as procompetitive."</p> <p>2 Do you see that?</p> <p>3 A. Yes.</p> <p>4 Q. Was DRS Version 1 procompetitive?</p> <p>5 A. In a sense that it --</p> <p>6 MS. YOUNG: Objection; form.</p> <p>7 Sorry. Go ahead and answer.</p> <p>8 A. In a sense that it involved Google reducing</p> <p>9 its take rate only, it -- it -- it could be regarded</p> <p>10 as -- as procompetitive or welfare enhancing.</p> <p>11 Q. (BY MR. EWALT) Is there any sense in which</p> <p>12 DRS Version 1 was not welfare enhancing?</p> <p>13 A. I do not -- I did not find any sense that it</p> <p>14 wasn't.</p> <p>15 Q. Would you please turn to Paragraph 809 of</p> <p>16 your opening report.</p> <p>17 The first sentence of that paragraph</p> <p>18 reads --</p> <p>19 MS. YOUNG: Can you give me one second?</p> <p>20 I'm going to -- it's taking me a little while to flip</p> <p>21 to it.</p> <p>22 Sorry. Go ahead.</p> <p>23 Q. (BY MR. EWALT) First sentence of</p> <p>24 Paragraph 809 of your opening report reads: "The</p> <p>25 combined effects of Last Look in DRS v2 led to revenue</p>	<p>1 Q. Does Footnote 1030 cite to Exhibit 11?</p> <p>2 A. Yes.</p> <p>3 Q. And in particular you cite Page 467 of</p> <p>4 Exhibit 11; is that correct?</p> <p>5 A. Yes.</p> <p>6 Q. And please turn to Page 467.</p> <p>7 A. Okay.</p> <p>8 Q. And that page states that DRS consistently</p> <p>9 makes publishers more money.</p> <p>10 Do you see that?</p> <p>11 A. I see that it says that.</p> <p>12 Q. And according to Exhibit 11, does DRS</p> <p>13 Version 2 consistently make publishers more money?</p> <p>14 A. As compared to no DRS.</p> <p>15 Q. Would you please turn to Page 469 in</p> <p>16 Exhibit 11?</p> <p>17 A. Yes.</p> <p>18 Q. You see the top of that page defines</p> <p>19 publisher revenue as the some of AdX revenue and</p> <p>20 third-party network revenue?</p> <p>21 A. Yes.</p> <p>22 Q. And you understand that third-party network</p> <p>23 revenue refers to rival ad exchanges and ad networks</p> <p>24 that would compete against AdX through remnant items.</p> <p>25 A. Yes.</p>
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<p>1 losses for the publishers for the following reasons."</p> <p>2 Do you see that?</p> <p>3 A. Yes.</p> <p>4 Q. In your reports, do you express any opinion</p> <p>5 that the combined effect of Last Look in tDRS led to</p> <p>6 revenue losses for publishers?</p> <p>7 A. I cannot whether I analyzed that particular</p> <p>8 combination in my reports.</p> <p>9 Q. Did -- in either of your reports, did you</p> <p>10 express an opinion as to whether tDRS harmed</p> <p>11 competition as compared to a world with no DRS?</p> <p>12 MS. YOUNG: Objection; form.</p> <p>13 A. I did not.</p> <p>14 (Marked Gans Exhibit No. 11.)</p> <p>15 Q. (BY MR. EWALT) I'm handing you what's been</p> <p>16 marked as Exhibit 11. It's a document titled "Overall</p> <p>17 Pub Yields with DRS v2." First page bears Bates</p> <p>18 number GOOG-NE-13234466.</p> <p>19 Do you see that?</p> <p>20 A. Yes.</p> <p>21 Q. Would you please turn to Paragraph 805 of</p> <p>22 your opening report, and actually take a look at</p> <p>23 Footnote 1030.</p> <p>24 A. 1030, I -- I -- oh, I see it, sir. Sorry.</p> <p>25 Yes. 1030.</p>	<p>1 MS. YOUNG: Objection; form.</p> <p>2 Sorry. Go ahead.</p> <p>3 [REDACTED]</p> <p>4 [REDACTED]</p> <p>5 [REDACTED]</p> <p>6 [REDACTED]</p> <p>7 [REDACTED]</p> <p>8 [REDACTED]</p> <p>9 [REDACTED]</p> <p>10 [REDACTED]</p> <p>11 [REDACTED]</p> <p>12 [REDACTED]</p> <p>13 [REDACTED]</p> <p>14 [REDACTED]</p> <p>15 [REDACTED]</p> <p>16 [REDACTED]</p> <p>17 [REDACTED]</p> <p>18 [REDACTED]</p> <p>19 [REDACTED]</p> <p>20 Q. (BY MR. EWALT) And is an output increase</p> <p>21 procompetitive?</p> <p>22 MS. YOUNG: Objection; form.</p> <p>23 A. Output increases are welfare enhancing.</p> <p>24 Q. (BY MR. EWALT) In either of your reports, did</p> <p>25 you express an opinion about the overall net effect of</p>

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<p>1 DRS considering all the effects on both advertisers 2 and publishers? 3 MS. YOUNG: Objection; form. 4 A. No, I didn't, because the conduct I evaluated 5 was not that. 6 Q. (BY MR. EWALT) All right. Let's talk about 7 line item capping. 8 A. Saving the best until last. 9 Okay. Let's go. 10 Q. Have you seen evidence that publishers using 11 large numbers of active line items impose costs on 12 Google? 13 MS. YOUNG: Objection; form. 14 A. I've seen -- I recall claims made by 15 Professor Baye to that effect. 16 (Marked Gans Exhibit No. 12.) 17 Q. (BY MR. EWALT) I'm handing you what's been 18 marked as Exhibit 12. It's a document titled 19 "PRD/Strat Review: Network Health." First page bears 20 Bates No. GOOG-DOJ-06875572. 21 Do you see that? 22 A. I do. 23 Q. Would you please turn to Paragraph 370 of 24 your rebuttal report? 25 A. Of the rebuttal report.</p>	<p>1 Q. You understand that Google is referring to 2 additional infrastructure costs associated with line 3 items, right? 4 A. Oh. 5 MS. YOUNG: Objection; form. 6 A. I have to admit, it doesn't plainly say 7 anything on that particular slide. 8 Okay. Yes. 9 Q. (BY MR. EWALT) So do you understand that 10 Google is referring to additional infrastructure costs 11 associated with line items on Page 586 of Exhibit 12? 12 MS. YOUNG: Objection; form. 13 A. I do. 14 Q. (BY MR. EWALT) Was limiting the number of 15 line items a way for Google to control those costs? 16 MS. YOUNG: Objection; form. 17 A. What this says is not allowing every 18 publisher to increase their line items -- or to -- no. 19 Not allowing a situation where every 20 publisher could increase -- would increase its line 21 items would result in costs for Google. Although that 22 is different from providing the means for some 23 publishers to do so. 24 The increment seemed -- it could be 25 referring to a different calculation.</p>
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<p>1 Oh, good grief. 2 Yeah. 3 Q. All right. I want to direct your attention 4 to Footnote 647. 5 A. Yes. 6 Q. Is Exhibit 12 the document you cited in 7 Footnote 647 of your rebuttal report? 8 A. Yes. 9 Q. Would you please turn to page ending in 686. 10 A. 686? 11 Q. Maybe 586. 12 A. Okay. 13 Q. No, might be 686. 14 A. I don't -- I don't have 686. 15 Q. I don't see 686 either. 16 Give me a second here. 17 Yes, would you please turn to the page 18 in Exhibit 12 with Bates number ending in 586? 19 A. Yes. 20 [REDACTED] 21 [REDACTED] 22 [REDACTED] 23 [REDACTED] 24 [REDACTED] 25 [REDACTED]</p>	<p>1 Q. (BY MR. EWALT) Okay. You can put that aside. 2 Could you please turn to Paragraph 649 in your 3 opening report? 4 A. Yes. 5 Q. One moment, please. 6 (Marked Gans Exhibit No. 13.) 7 A. Exhibit incoming. 8 Q. (BY MR. EWALT) Indeed. 9 I'm handing you what's been marked as 10 Exhibit 13. This is an e-mail dated October 8, 2018. 11 The first page bears Bates No. GOOG-DOJ-15127000. 12 Do you see that? 13 A. Yes. 14 Q. And direct your attention to Footnote 827 of 15 your opening report. 16 A. Yes. 17 Q. Is Exhibit 13 a document that's cited in 18 Footnote 827? 19 A. Yes. 20 Q. And you've reviewed Exhibit 13 before? 21 A. Yes. 22 Q. Do you recognize Exhibit 13 as an e-mail 23 thread among Google employees related to line item 24 capping? 25 A. Yes.</p>

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<p>1 Q. Would you please turn to the page in 2 Exhibit 13 with Bates number ending in 001. 3 A. Yes. 4 Q. Towards the bottom of that page, do you see 5 an e-mail from [REDACTED]? 6 A. Yes. 7 Q. And Mr. [REDACTED] is a senior engineer at 8 Google? 9 A. I don't recall. 10 Q. Does that e-mail continue on to the page 11 ending in 002? 12 A. Yes. 13 Q. And at the top of the page 002 there's a 14 section titled "Header Bidding Friction." 15 Do you see that? 16 A. Yes. 17 Q. Mr. [REDACTED] wrote: "The goal is not to stop 18 Header Bidding. It is to introduce friction (or 19 costs) that make our programatic offerings more 20 compelling. The way our system was set up makes it 21 free for pubs to use Header Bidding but costs us 22 serving resources (esp for SB and premium pubs with 23 lower negotiated rates). This friction is an 24 important part of ensuring that the monetization tools 25 the pub has available are not subsidized by us to our</p>	<p>1 Q. And Mr. Korula was agreeing with Mr. [REDACTED] 2 that Google's goal with line item caps was not to stop 3 Header Bidding, right? 4 MS. YOUNG: Objection; form. 5 And, Professor Gans, if you need to read 6 the entire e-mail to answer any questions about this 7 multipage e-mail, please do so. 8 MR. EWALT: All right. I'll ask the 9 counsel not coach the witness. 10 A. Okay. Could you ask the question again. 11 Q. (BY MR. EWALT) Was Mr. Korula agreeing with 12 Mr. [REDACTED] that Google's goal with line item caps 13 was not to stop Header Bidding? 14 MS. YOUNG: Objection; form. 15 A. I think he was agreeing with him that a way 16 to sell the decision to put in line items caps was 17 to -- was to -- that they didn't want to encourage 18 header -- greater Header Bidding because of the 19 specific costs that Header Bidding imposes on Google. 20 Q. (BY MR. EWALT) Google was looking to make 21 sure that it wasn't stuck absorbing as much of the 22 costs of Header Bidding as publishers chose to impose. 23 Is that fair? 24 MS. YOUNG: Objection; form. 25 A. Well, I think if you look at this message in</p>
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<p>1 detriment." 2 Do you see that? 3 A. Yes. 4 Q. And returning to the first page of 5 Exhibit 13, there's an e-mail response from Nitish 6 Korula. 7 Do you see that? 8 A. Yes. 9 Q. Do you know whether Mr. Korula was another 10 senior engineer at Google? 11 A. I do not recall. 12 Q. I would like to direct your attention to 13 Point 4 in Mr. Korula's e-mail. 14 A. Yes. 15 Q. And he wrote: "On friction, I think Glenn 16 nailed it. The goal is not to stop Header Bidding. 17 The way our system was set up makes it free for pubs 18 to use and expand Header Bidding but costs us serving 19 resources and reporting resources and troubleshooting, 20 et cetera. Even if we can't eliminate it, why should 21 we subsidize publishers doing something suboptimal? 22 That is also bad for users and it introduces more 23 latency, et cetera." 24 Do you see that? 25 A. Yes.</p>	<p>1 the context of the e-mail thread that was preceding 2 it, I think there was the kind of internal debate and 3 discussion that was going on that we discussed earlier 4 in -- in the day in this thing. 5 And so a plain, out-of-context reading 6 of that particular statement of a goal should not be 7 done. 8 Q. (BY MR. EWALT) You shouldn't read the e-mails 9 written by senior Google engineers to reflect their 10 actual intent at the time they wrote it? 11 MS. YOUNG: Objection; form. 12 A. Not without taking into account what the 13 earlier e-mail threads may have said with regard to 14 the context. But even in the plain reading of it, I 15 don't think this makes any difference for any 16 conclusions that I reached. 17 Q. (BY MR. EWALT) Okay. Would you please take a 18 look at Page 140 of your rebuttal report. 19 A. Yes. 20 MS. YOUNG: Page 140? 21 MR. EWALT: Yes. 22 Q. (BY MR. EWALT) All right. And do you see 23 that there -- that we're in the section dealing with 24 line item capping of your rebuttal report? 25 A. Yes.</p>

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<p style="text-align: right;">Page 246</p> <p>1 Q. I want to direct your attention to</p> <p>2 Paragraph 370, and specifically to the second to last</p> <p>3 sentence which appears on Page 142.</p> <p>4 A. Yes.</p> <p>5 Q. And do you see where you wrote: "What is at</p> <p>6 the heart of this is the evidence regarding Google's</p> <p>7 intent"?</p> <p>8 A. Yes.</p> <p>9 Q. And were you referring to evidence of</p> <p>10 Google's intent related to line item capping?</p> <p>11 A. Yes.</p> <p>12 Q. And in Exhibit 13 we saw an internal</p> <p>13 discussion with Mr. [REDACTED] and Mr. Korula agreeing</p> <p>14 that Google's goal was not to stop Header Bidding,</p> <p>15 right?</p> <p>16 A. We saw --</p> <p>17 MS. YOUNG: Objection; form.</p> <p>18 Go ahead.</p> <p>19 A. That was part of this internal discussion,</p> <p>20 yes.</p> <p>21 Q. (BY MR. EWALT) Turning back to Paragraph 370,</p> <p>22 the final sentence reads: "The analysis in my initial</p> <p>23 report demonstrated that Google had incentives to cap</p> <p>24 line items, even if it was costless to expand them,</p> <p>25 which is consistent with the hypothesis that Google's</p>	<p style="text-align: right;">Page 248</p> <p>1 and reducing their line items would have only had a</p> <p>2 limited impact on costs..."</p> <p>3 We could review that if you wish. I</p> <p>4 think it's one of ours -- ones already we've</p> <p>5 discussed.</p> <p>6 "...and that Google could also mitigate</p> <p>7 any cost increase by adapting its pricing or not</p> <p>8 making money on a pub for a strategic reason since it</p> <p>9 was not a lot of money."</p> <p>10 In other words, Google, to the extent</p> <p>11 that publishers valued increased line items, didn't</p> <p>12 have to say no more line items. What they could say</p> <p>13 is, This costs us money, here's what you, publisher,</p> <p>14 are going to have to pay if you wish to have line</p> <p>15 items.</p> <p>16 Yet it never offered any publisher that,</p> <p>17 to my knowledge.</p> <p>18 "So while Google acknowledged that these</p> <p>19 were all options to solve this new industry trend, I</p> <p>20 showed in my opening report that Google regularly</p> <p>21 denied publishers' request for exemptions to allow</p> <p>22 increases in line items.</p> <p>23 "Google's line items -- limits on line</p> <p>24 items were 'unethical - because it was forcing out</p> <p>25 competition (no matter the good intentions and the</p>
<p style="text-align: right;">Page 247</p> <p>1 choices were an abuse of its monopoly power."</p> <p>2 Do you see that?</p> <p>3 A. Yes.</p> <p>4 Q. Was it costless for Google to expand limits</p> <p>5 on line items?</p> <p>6 A. You'll recall that we had an earlier</p> <p>7 discussion regarding the costs involved in conduct.</p> <p>8 And I said that if the costs were -- that there were</p> <p>9 no costs, that makes one conclusion clear. If there</p> <p>10 were very significant costs, you reach a different</p> <p>11 conclusion.</p> <p>12 When there are only modest costs, it is</p> <p>13 still the case that you would -- could see the</p> <p>14 strategy as being an abuse of monopoly power.</p> <p>15 Q. How can you tell how much cost -- how</p> <p>16 significant the costs are that Google would have to</p> <p>17 absorb before deciding to avoid the costs would not be</p> <p>18 anticompetitive?</p> <p>19 A. So let's look at the context of this entire</p> <p>20 paragraph that is done here. Let me read it to you.</p> <p>21 "So Professors Baye and Milgrom argue</p> <p>22 that line items were capped because it was costly for</p> <p>23 Google to expand them. However, the document used by</p> <p>24 Professor Baye to support his claim also shows there</p> <p>25 were only a few publishers with over 61k line items,</p>	<p style="text-align: right;">Page 249</p> <p>1 reasonable impact on system stability) at the end of</p> <p>2 the day was forcing them to change their business</p> <p>3 strategy kicking out HBs, head of bidding."</p> <p>4 Quoting a statement from discussion with</p> <p>5 The Washington Post.</p> <p>6 "I note that even if there were such</p> <p>7 costs, Google, given its monopoly power and</p> <p>8 integration, would not have an incentive to make the</p> <p>9 optimal trade off. Professor Milgrom, as he</p> <p>10 consistently does throughout his analysis, fails to</p> <p>11 consider Google's broad multimarket incentives in</p> <p>12 making these decisions."</p> <p>13 And then we quoted the last two ones</p> <p>14 before.</p> <p>15 So you'll see there that captures what</p> <p>16 I've already just described to you.</p> <p>17 Q. You're aware that Google granted exceptions</p> <p>18 to the line item cap to some publishers?</p> <p>19 A. Yes.</p> <p>20 Q. And did Google charge those publishers</p> <p>21 additional fees when they granted the exceptions to</p> <p>22 the line item cap?</p> <p>23 A. No.</p> <p>24 Q. Was it anticompetitive for Google not to</p> <p>25 charge more for exemptions from line item limits?</p>

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<p>1 MS. YOUNG: Objection; form.</p> <p>2 A. In my analysis, I can only analyze the</p> <p>3 conduct that was actually occurred.</p> <p>4 The conduct was a simple line item cap</p> <p>5 without any engagement in strategies that might have</p> <p>6 mitigated the cost that that was imposing on its own</p> <p>7 customers.</p> <p>8 Q. (BY MR. EWALT) And is -- in your view, is it</p> <p>9 anticompetitive because Google chose a strategy of</p> <p>10 imposing a cap as opposed to the strategy of charging</p> <p>11 customers for higher usage in line items?</p> <p>12 A. I am suggesting that not charging for it is</p> <p>13 the dog that didn't bark that shows that Google's</p> <p>14 intent was about limiting the ability to use Header</p> <p>15 Bidding rather than its own cost management issues.</p> <p>16 Q. Would you please turn to Paragraph 675 of</p> <p>17 your opening report.</p> <p>18 And the last sentence of that paragraph</p> <p>19 reads: "In October 2018, only 2 out of the 18</p> <p>20 publishers over the limit were granted exceptions."</p> <p>21 Do you see that?</p> <p>22 A. Yes.</p> <p>23 Q. So as of 2018, there were 18 publishers that</p> <p>24 were over the line item limit?</p> <p>25 A. That were -- that requested exemptions. Yes,</p>	<p>1 A. Could you ask the question again.</p> <p>2 Q. (BY MR. EWALT) Sure.</p> <p>3 In that sentence that I just read to you, is</p> <p>4 there any mention about one way or the other whether</p> <p>5 these 18 premium pubs requested exemptions over the</p> <p>6 line item limit?</p> <p>7 MS. YOUNG: Same objection.</p> <p>8 A. This particular paragraph doesn't speak to</p> <p>9 the process by which handling of exemptions arose.</p> <p>10 Q. (BY MR. EWALT) Okay. Do you know whether</p> <p>11 those 18 publishers all operated in the United States?</p> <p>12 A. I do not know where they operated.</p> <p>13 Q. Do you know what percentage of all U.S. ad</p> <p>14 exchange transactions were accounted for by those 18</p> <p>15 publishers?</p> <p>16 A. I don't know because I don't know the list of</p> <p>17 those 18 publishers.</p> <p>█ [REDACTED]</p> <p>█ [REDACTED]</p> <p>█ [REDACTED]</p> <p>█ [REDACTED]</p> <p>█ [REDACTED]</p> <p>█ [REDACTED]</p> <p>█ [REDACTED]</p> <p>█ [REDACTED]</p> <p>█ [REDACTED]</p> <p>█ [REDACTED]</p>
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<p>1 that -- that's my understanding.</p> <p>2 Q. So your -- your understanding is that</p> <p>3 these -- these are only the 18 publishers that</p> <p>4 requested exemptions?</p> <p>5 A. Yes.</p> <p>6 Q. All right. Now, would you please turn back</p> <p>7 to Exhibit 13.</p> <p>8 A. Yeah.</p> <p>9 Q. And please, within Exhibit 13, turn to the</p> <p>10 page ending with 003.</p> <p>11 A. Yes.</p> <p>12 Q. And there's a heading that reads: "Move away</p> <p>13 from Header Bidding towards exchange bidding."</p> <p>14 Do you see that?</p> <p>15 A. Yes.</p> <p>16 Q. The second sentence reads: "There are only</p> <p>17 18 premium pubs over the current limit, only 2 of</p> <p>18 which actually have exceptions."</p> <p>19 Do you see that?</p> <p>20 A. Yes.</p> <p>21 Q. And that description just refers to 18</p> <p>22 premium pubs over the current limit without any</p> <p>23 mention as to whether those are the only publishers</p> <p>24 who requested exemptions; is that right?</p> <p>25 MS. YOUNG: Objection; form.</p>	<p>█ [REDACTED]</p> <p>2 Q. (BY MR. EWALT) Do you have any reason to</p> <p>3 believe that any publisher was prevented from using</p> <p>4 Header Bidding because of the line item caps?</p> <p>5 MS. YOUNG: Objection; form.</p> <p>6 A. I don't believe the line item caps was a full</p> <p>7 prevention of using Header Bidding. It just made it</p> <p>8 more difficult to use Header Bidding.</p> <p>9 Q. (BY MR. EWALT) Would you please turn to</p> <p>10 Paragraph 657 of your opening report.</p> <p>11 A. Yes.</p> <p>12 Q. And there you talk about Header Bidding</p> <p>13 Manager.</p> <p>14 Is that fair?</p> <p>15 A. Seems that way.</p> <p>16 Q. Did Google rule out Header Bidding Manager in</p> <p>17 2021?</p> <p>18 A. Yes. Started enrolling publishers into it in</p> <p>19 2021 is what I know.</p> <p>20 Q. And is Header Bidding Manager a tool that</p> <p>21 allows publishers to set up Header Bidding without</p> <p>22 having to set up large numbers of line items?</p> <p>23 A. I believe that's what it does.</p> <p>24 Q. Does the availability of Header Bidding</p> <p>25 Manager reduce the effects on Header Bidding that you</p>

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<p>1 found were caused by line item caps?</p> <p>2 MS. YOUNG: Objection; form.</p> <p>3 A. Would you ask that question again?</p> <p>4 Q. (BY MR. EWALT) Does the availability of</p> <p>5 Header Bidding Manager reduce the effects on Header</p> <p>6 Bidding that you found were caused by line item caps?</p> <p>7 MS. YOUNG: Same objection.</p> <p>8 A. It -- it may do so for some publishers.</p> <p>9 Q. (BY MR. EWALT) In either of your reports, did</p> <p>10 you express an opinion about the overall net effect of</p> <p>11 line item caps considering the effects on both</p> <p>12 advertisers and publishers?</p> <p>13 MS. YOUNG: Objection; form.</p> <p>14 A. Line item caps were a restriction on -- on</p> <p>15 publishers, and so my analysis was focused on the</p> <p>16 impact on competitive conditions that faced those --</p> <p>17 that -- that were in the publisher facing markets.</p> <p>18 Q. (BY MR. EWALT) And did you consider impacts</p> <p>19 on advertisers from line item capping?</p> <p>20 A. I didn't directly consider that.</p> <p>21 Q. Let's talk about data redactions.</p> <p>22 Would you please turn to Paragraph 688</p> <p>23 of your opening report?</p> <p>24 A. Yes.</p> <p>25 Q. The first sentence reads: "This section</p>	<p>1 the -- let me strike all that.</p> <p>2 Which sources indicate that it was</p> <p>3 Google's true motivation in redacting data -- strike</p> <p>4 that.</p> <p>5 Late for me too.</p> <p>6 Which sources indicate that Google's</p> <p>7 true motivation for redacting data files was to remove</p> <p>8 publisher's ability to compare their performance</p> <p>9 across competing exchanges and Header Bidding?</p> <p>10 A. Well, I think the evidence cited in 690</p> <p>11 describes those things. Plus, that Google understand</p> <p>12 that it would lead to objections from publishers in</p> <p>13 691.</p> <p>14 Q. I don't see in either of those paragraphs any</p> <p>15 mention about the objections being related to the</p> <p>16 comparison of exchanges in Header Bidding.</p> <p>17 MS. YOUNG: Objection; form.</p> <p>18 Q. (BY MR. EWALT) Where do you -- where do you</p> <p>19 see that?</p> <p>20 MS. YOUNG: Objection; form.</p> <p>21 A. These were for information the publishers may</p> <p>22 use in certain ways that would facilitate their</p> <p>23 ability to understand the performance of their</p> <p>24 products going through Google's exchange that they</p> <p>25 would be able to therefore through that increased</p>
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<p>1 explains that Google's true motivation in reducing</p> <p>2 [verbatim] data for publisher was to remove the</p> <p>3 ability of publishers to gain insights about their</p> <p>4 business on competing exchanges through joining the DT</p> <p>5 files and ultimately to preference its ad exchange by</p> <p>6 removing publisher's abilities to compare their</p> <p>7 performance across competing exchanges and Header</p> <p>8 Bidding."</p> <p>9 Do you see that?</p> <p>10 A. Yes, except it was redacting not reducing.</p> <p>11 Q. Oh, I apologize.</p> <p>12 MS. YOUNG: Objection; form.</p> <p>13 Q. (BY MR. EWALT) Can you please point me to the</p> <p>14 evidence that you relied upon to support your</p> <p>15 conclusion that Google's true motivation in redacting</p> <p>16 data was to remove publisher's ability to compare</p> <p>17 their performance across competing exchanges in Header</p> <p>18 Bidding?</p> <p>19 A. Well, it's various things that I list</p> <p>20 following that paragraph in Paragraph 690 and</p> <p>21 Paragraph 691.</p> <p>22 In paragraph -- yeah. 690 and 691,</p> <p>23 yeah.</p> <p>24 Q. Okay. So which of the sources there indicate</p> <p>25 that it was Google's intention -- excuse me. Which of</p>	<p>1 knowledge be able compare more clearly the performance</p> <p>2 of Google's products in comparison into transactions</p> <p>3 that went through other exchanges using Header</p> <p>4 Bidding. By having that understanding, they would be</p> <p>5 able to engage in Header Bidding more effectively for</p> <p>6 them.</p> <p>7 Q. (BY MR. EWALT) I'm sorry. Are you reading</p> <p>8 from the report somewhere?</p> <p>9 A. No, I'm telling you.</p> <p>10 Q. Okay. I was just asking where in your report</p> <p>11 you have the evidence for this?</p> <p>12 A. This is -- this is at 690. 690 is the</p> <p>13 evidence for it.</p> <p>14 Q. And where in 690 do you quote evidence</p> <p>15 discussing the comparison of exchanges in Header</p> <p>16 Bidding?</p> <p>17 A. If you look here, the exchanges that were</p> <p>18 made to the data transfer files, there's a discussion</p> <p>19 of why those redactions occur, and there's a -- trying</p> <p>20 to prevent the publishers from being able to determine</p> <p>21 advertisers who are willing to pay for each user's</p> <p>22 impression.</p> <p>23 That's a critical input in understanding</p> <p>24 what the value that Google is potentially bringing to</p> <p>25 publishers through its ad exchange.</p>

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<p style="text-align: right;">Page 258</p> <p>1 And these are done down to high</p> <p>2 gradation levels that allows them to engage in yield</p> <p>3 optimization.</p> <p>4 Q. And so you were just referring to the</p> <p>5 sentence with the quote that ends with Footnote 881;</p> <p>6 is that right?</p> <p>7 A. That's right.</p> <p>8 Q. And the quote there says: "We want to</p> <p>9 prevent a publisher to be able to determine these</p> <p>10 advertisers were willing to pay this much for that</p> <p>11 user's impression," right?</p> <p>12 A. Yes.</p> <p>13 Q. And that quote says that Google was -- wanted</p> <p>14 to prevent a publisher from being able to determine</p> <p>15 the advertiser's willingness to pay, right?</p> <p>16 A. Yes.</p> <p>17 Q. It doesn't say anything there about wanting</p> <p>18 to prevent publishers from comparing exchanges, does</p> <p>19 it?</p> <p>20 MS. YOUNG: Objection; form.</p> <p>21 A. Absolutely. That's how -- that's what</p> <p>22 they're trying to do in explain -- in comparing</p> <p>23 exchanges. You need to understand what the bid prices</p> <p>24 coming through those exchanges mean for you and to</p> <p>25 make inferences from them.</p>	<p style="text-align: right;">Page 260</p> <p>1 Exhibit 14?</p> <p>2 A. Oh, you've given me two.</p> <p>3 Q. Oh.</p> <p>4 A. Paragraph 11. I'm sorry. I'm looking at</p> <p>5 page.</p> <p>6 Yes.</p> <p>7 Q. Okay. And the second sentence there says:</p> <p>8 "Prior to September 2019, Google allowed buyers to opt</p> <p>9 out of including information about their bids in BDT</p> <p>10 files."</p> <p>11 You see that?</p> <p>12 A. Yes.</p> <p>13 Q. Do you have any reason to doubt that prior to</p> <p>14 September 2019 Google allowed buyers to opt out of</p> <p>15 including information about their bids in BDT files?</p> <p>16 A. No.</p> <p>17 MS. YOUNG: Objection; form.</p> <p>18 A. No.</p> <p>19 Q. (BY MR. EWALT) Are you aware that buyer</p> <p>20 opt-outs limited the amount of bid data that was</p> <p>21 available to publishers?</p> <p>22 A. I would expect that they would.</p> <p>23 Q. Are you aware that when Google made the data</p> <p>24 redactions discussed in your reports they also removed</p> <p>25 the ability of buyers to opt out of having their bid</p>
<p style="text-align: right;">Page 259</p> <p>1 And, in fact, it's just a general</p> <p>2 approach to any auction theory that you would -- you</p> <p>3 know, an auction -- sorry, auction participation, that</p> <p>4 you would engage in such things.</p> <p>5 So information is required. Google is</p> <p>6 redacting that information, and that's why the</p> <p>7 publishers want that information.</p> <p>8 Q. (BY MR. EWALT) Are you aware that prior to</p> <p>9 2019, buyers could opt out of allowing Google to share</p> <p>10 data about their bids with publishers?</p> <p>11 A. I -- I'm -- I'm not aware of the specifics of</p> <p>12 that, but it's possible.</p> <p>13 (Marked Gans Exhibit No. 14.)</p> <p>14 Q. (BY MR. EWALT) I'm handing you what's been</p> <p>15 marked as Exhibit 14. It's the declaration of [REDACTED]</p> <p>16 [REDACTED], signed on June 28, 2024. And the first page</p> <p>17 bears Bates No. GOOG-AT-MDL-C-000073682.</p> <p>18 Do you see that?</p> <p>19 A. Yes.</p> <p>20 Q. Have you seen Exhibit 14 before?</p> <p>21 A. I am not sure if I have seen it before.</p> <p>22 Q. All right. Would you --</p> <p>23 A. Certainly, it seems to be done after my first</p> <p>24 report.</p> <p>25 Q. Okay. Could you turn to Paragraph 11 in</p>	<p style="text-align: right;">Page 261</p> <p>1 data shared with publishers?</p> <p>2 MS. YOUNG: Objection; form.</p> <p>3 A. I don't know the circumstances of that.</p> <p>4 Q. But did you know that Google removed the</p> <p>5 opt-out at the same time they made the redactions to</p> <p>6 the data transfer files?</p> <p>7 MS. YOUNG: Objection; form.</p> <p>8 A. I can't recall.</p> <p>9 Q. (BY MR. EWALT) Are you aware of whether some</p> <p>10 publishers considered the 2019 changes to the data</p> <p>11 transfer files to be an improvement because they</p> <p>12 received bid data from all buyers?</p> <p>13 MS. YOUNG: Objection; form.</p> <p>14 A. I'm not specifically aware of what some</p> <p>15 publishers may have viewed this as.</p> <p>16 Q. (BY MR. EWALT) Is it your opinion that the</p> <p>17 data redactions were anticompetitive because Google</p> <p>18 made changes to what data was available in the data</p> <p>19 transfer files?</p> <p>20 A. My opinion is that the redactions part of it</p> <p>21 that Google made to the extent that it left publishers</p> <p>22 with -- some publishers with less information is</p> <p>23 anticompetitive because if the markets were</p> <p>24 competitive, Google would have not -- either not</p> <p>25 engaged in those redactions or publishers would have</p>

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<p>1 been able to switch to a provider that provided them</p> <p>2 the information they needed.</p> <p>3 Q. Okay. Would you please turn to Paragraph 699</p> <p>4 in your opening report.</p> <p>5 A. Yes.</p> <p>6 [REDACTED]</p> <p>7 [REDACTED]</p> <p>8 [REDACTED]</p> <p>9 [REDACTED]</p> <p>10 [REDACTED]</p> <p>11 [REDACTED]</p> <p>12 [REDACTED]</p> <p>13 [REDACTED]</p> <p>14 [REDACTED]</p> <p>15 [REDACTED]</p> <p>16 [REDACTED]</p> <p>17 [REDACTED]</p> <p>18 [REDACTED]</p> <p>19 [REDACTED]</p> <p>20 Q. Could you turn back to Exhibit 14?</p> <p>21 I want to direct your attention to</p> <p>22 Paragraph 17 on Page 9.</p> <p>23 A. Yes.</p> <p>24 Q. And Paragraph 17 states that as of August 31,</p> <p>25 2019, the 41 publishers listed below subscribed to</p>	<p>1 My analysis was on the impact of the</p> <p>2 data redaction conduct on the ability of Header</p> <p>3 Bidding to impact on ad exchange composition.</p> <p>4 The manifestation of which might have</p> <p>5 been a reduction in the use of Header Bidding or it</p> <p>6 might not have.</p> <p>7 Q. (BY MR. EWALT) Is it your opinion that the</p> <p>8 redaction of the data files could have affected</p> <p>9 competition in the ad exchange market even if it had</p> <p>10 no impact on publisher usage of Header Bidding?</p> <p>11 MS. YOUNG: Objection; form.</p> <p>12 A. Yes, because it could have reduced their</p> <p>13 ability to use Header Bidding effectively.</p> <p>14 Q. (BY MR. EWALT) In either of your reports did</p> <p>15 you express an opinion about the overall net effect of</p> <p>16 the data redactions considering the effects on both</p> <p>17 advertisers and publishers?</p> <p>18 MS. YOUNG: Objection; form.</p> <p>19 A. It was not necessary given the conduct was on</p> <p>20 the publisher market.</p> <p>21 Q. (BY MR. EWALT) So is fair to say that you did</p> <p>22 not evaluate the effects of the data redactions on</p> <p>23 advertisers?</p> <p>24 A. My focus was on, as I said before, whether</p> <p>25 Google would have engaged in this conduct had they had</p>
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<p>1 receive BDT files.</p> <p>2 Do you see that?</p> <p>3 A. Yes.</p> <p>4 Q. Do you know what percentage of all U.S. ad</p> <p>5 exchange transactions were accounted for by those 41</p> <p>6 publishers?</p> <p>7 MS. YOUNG: Objection; form.</p> <p>8 A. No.</p> <p>9 MS. YOUNG: Go ahead.</p> <p>10 A. No.</p> <p>11 Q. (BY MR. EWALT) Do you have any reason to</p> <p>12 believe that any publisher was prevented or dissuaded</p> <p>13 from using Header Bidding because of the data transfer</p> <p>14 files?</p> <p>15 MS. YOUNG: Objection; form.</p> <p>16 A. My analysis was in terms of how effective</p> <p>17 they could -- effectively they could use Header</p> <p>18 Bidding in order to create further exchange</p> <p>19 competition, not necessarily whether they would</p> <p>20 curtail the use of Header Bidding or not.</p> <p>21 Q. (BY MR. EWALT) Is it fair to say you did not</p> <p>22 analyze whether any publisher curtailed its use of</p> <p>23 Header Bidding because of the data transfer files?</p> <p>24 MS. YOUNG: Objection; form.</p> <p>25 A. I was not able to -- I did not -- sorry.</p>	<p>1 a competitive ad server market. And my conclusion was</p> <p>2 that they would not have.</p> <p>3 Q. Did you evaluate the effect of data</p> <p>4 redactions on advertisers?</p> <p>5 A. I wasn't --</p> <p>6 MS. YOUNG: Objection; form.</p> <p>7 Go ahead.</p> <p>8 THE WITNESS: Sorry.</p> <p>9 A. I wasn't calculating the incidents of damage</p> <p>10 of the anticompetitive conduct, just the presence of</p> <p>11 it and the harm -- the existence of harm to</p> <p>12 competition.</p> <p>13 MR. EWALT: We can go off the record.</p> <p>14 THE VIDEOGRAPHER: This is now the end</p> <p>15 of Video 6 of Joshua Gans. We're off the record. The</p> <p>16 time is approximately 6:08.</p> <p>17 (Break from 6:08 p.m. to 7:01 p.m.)</p> <p>18 THE VIDEOGRAPHER: Now on the record of</p> <p>19 Video 7 of Joshua Gans. The time is approximately</p> <p>20 7:01.</p> <p>21 Q. (BY MR. EWALT) Professor Gans, during the</p> <p>22 break did you discuss the substance of this case with</p> <p>23 counsel?</p> <p>24 MS. YOUNG: Same instruction as earlier</p> <p>25 today. Pursuant to the expert stipulation entered by</p>

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<p style="text-align: right;">Page 266</p> <p>1 the court in this case, I instruct the witnesses not</p> <p>2 to -- witness not to disclose the contents of</p> <p>3 communications with counsel.</p> <p>4 Q. (BY MR. EWALT) Based on that instruction, we</p> <p>5 pass the witness.</p> <p>6 EXAMINATION</p> <p>7 BY MS. YOUNG:</p> <p>8 Q. Professor Gans, do you recall the questions</p> <p>9 that Google's counsel asked you today regarding your</p> <p>10 opinions in your June 7 opening report and</p> <p>11 corresponding errata?</p> <p>12 A. Yes.</p> <p>13 Q. Was any of your testimony today intended to</p> <p>14 change the opinions expressed in your opening report</p> <p>15 and corresponding errata?</p> <p>16 A. No.</p> <p>17 Q. Was any of your testimony today intended to</p> <p>18 limit the opinions expressed in your opening report</p> <p>19 and corresponding errata?</p> <p>20 A. No.</p> <p>21 Q. Professor Gans, do you recall the questions</p> <p>22 that Google's counsel asked you today about your</p> <p>23 opinions in your September 9, rebuttal report?</p> <p>24 A. Yes.</p> <p>25 Q. Aside from the two issues that you noted on</p>	<p style="text-align: right;">Page 268</p> <p>1 tested?</p> <p>2 A. Yes.</p> <p>3 Q. Have the methodologies that you used been the</p> <p>4 subject of peer review and publication?</p> <p>5 A. Yes.</p> <p>6 Q. Are the methodologies that you used generally</p> <p>7 accepted in the field of economics to define markets?</p> <p>8 A. Yes.</p> <p>9 Q. Did you reliably apply the methodologies that</p> <p>10 you used to form your opinions about the relevant</p> <p>11 markets in this case?</p> <p>12 A. Yes.</p> <p>13 Q. Did you have sufficient facts or data to</p> <p>14 reach the opinions you did in this case about market</p> <p>15 definitions?</p> <p>16 A. Yes.</p> <p>17 Q. Did you have sufficient facts and data to</p> <p>18 reach your opinions within your two reports in this</p> <p>19 case?</p> <p>20 A. Yes.</p> <p>21 Q. Did you offer any new methodologies or</p> <p>22 opinions in your rebuttal report?</p> <p>23 A. No.</p> <p>24 Q. Are you offering any new opinions, as you sit</p> <p>25 here today, subject to your continuing review of the</p>
<p style="text-align: right;">Page 267</p> <p>1 the record with respect to the term "numerator" used</p> <p>2 in Paragraph 18 of your rebuttal report and the</p> <p>3 missing footnote to Figure 7 in your rebuttal report,</p> <p>4 was any of your testimony today intended to change the</p> <p>5 opinions expressed in your rebuttal report?</p> <p>6 A. No.</p> <p>7 Q. Was any of your testimony today intended to</p> <p>8 limit the opinions expressed in your rebuttal report?</p> <p>9 A. No.</p> <p>10 Q. Professor Gans, do you recall the questions</p> <p>11 that Google's counsel asked you earlier today about</p> <p>12 the methodologies that you used in determining the</p> <p>13 market definitions in your opening report?</p> <p>14 A. Yes.</p> <p>15 Q. Do you recall Google's counsel asking you</p> <p>16 questions regarding the Brown Shoe factors?</p> <p>17 A. Yes.</p> <p>18 Q. Do you recall Google's counsel asking you</p> <p>19 questions regarding the hypothetical monopolist test,</p> <p>20 otherwise known as HMT?</p> <p>21 A. Yes.</p> <p>22 Q. Were the methodologies that you used based on</p> <p>23 reliable and generally accepted economic principles?</p> <p>24 A. Yes.</p> <p>25 Q. Can the methodologies that you used be</p>	<p style="text-align: right;">Page 269</p> <p>1 Professor Baye surrebuttal report and backup</p> <p>2 materials?</p> <p>3 A. No.</p> <p>4 Q. Professor Gans, do you recall the questioning</p> <p>5 by Google's counsel regarding the SSNIP, which stands</p> <p>6 for small but significant nontransitory increase in</p> <p>7 price?</p> <p>8 A. Yes.</p> <p>9 Q. Do you recall the questioning by Google</p> <p>10 counsel about the SSNIP in the context of the</p> <p>11 hypothetical monopolist test, or HMT?</p> <p>12 A. Yes.</p> <p>13 Q. In conducting -- strike that. I'll start</p> <p>14 over.</p> <p>15 Is conducting a quantitative SSNIP test</p> <p>16 necessary to conduct a reliable HMT to define a</p> <p>17 relevant market?</p> <p>18 A. No.</p> <p>19 Q. Is starting with an identified competitive</p> <p>20 price level necessary to conducted a reliable HMT to</p> <p>21 define a relevant market based on economic principles?</p> <p>22 A. No.</p> <p>23 Q. Do you recall when Google's counsel asked</p> <p>24 whether you investigated if publishers could shift</p> <p>25 enough users from websites to apps in order to make it</p>

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<p>1 unprofitable for a hypothetical monopolist of ad 2 exchanges in order to raise prices of open web display 3 impressions? 4 A. Yes. 5 Q. In your opening report did you investigate 6 the substitutability between selling open web display 7 advertising inventory and selling in-app inventory? 8 A. Yes. 9 Q. For example, did you find that publishers who 10 sell primary in-app inventory use different tools than 11 those selling open web display advertising? 12 A. Yes. 13 Q. Professor Gans, do you recall being asked 14 about your reliance on a conversation with Professor 15 Chandler with respect to your opinions about distinct 16 product markets from an industry perspective? 17 A. Distinct product markets? 18 Q. I can re-ask the question. It was a long 19 question. 20 A. I recall a discussion of distinct pricing. 21 Q. Okay. Do you recall discussing with Google 22 counsel regarding your conversation with Professor 23 Chandler about ad-buying tools for small advertisers? 24 A. Yes. 25 Q. Other than your conversation with Professor</p>	<p>1 Q. In your opening report do you provide 2 opinions on the timing of Google's monopoly power in 3 the ad exchange market that you define? 4 A. Yes, I have -- provide opinions on the time. 5 Q. If we can go to Table 5 of your opening 6 report that follows Paragraph 372. 7 A. Yes. 8 Q. Okay. Does that table -- does that table 9 provide your opinion on the timing of Google's 10 monopoly power in the ad exchange market that you 11 define? 12 A. It provides opinion on the times that Google 13 had monopoly power. 14 [REDACTED] 15 [REDACTED] 16 [REDACTED] 17 [REDACTED] 18 Q. Professor Gans, do you stand by that opinion 19 of market share calculation today? 20 A. Yes. 21 Q. If we can go to Paragraph 391 of your opening 22 report. 23 A. Yes. 24 Q. Have you read that paragraph? 25 A. Yes.</p>
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<p>1 Chandler, did you review documents that support your 2 contention of industry recognition of ad-buying tools 3 for small advertisers as a distinct product market? 4 A. Yes. 5 Q. Did you review any deposition testimony that 6 supports industry recognition of ad-buying tools for 7 small advertisers as a distinct product market? 8 A. I believe so. 9 Q. And did that review of documents and 10 deposition testimony also support your contention that 11 there's public recognition of ad-buying tools for 12 small advertisers as a distinct product market? 13 A. My recollection is it was supportive of that 14 contention. 15 Q. Did you -- strike that. 16 Other than your conversation with 17 Professor Chandler, did you review documents and 18 deposition testimony that supported your contention 19 that industry -- of industry and public recognition of 20 publisher ad servers as a distinct product market? 21 A. I did. 22 Q. Professor Gans, do you recall when Google's 23 counsel asked you about the date on which Google 24 obtained monopoly power in the ad exchange market? 25 A. Yes.</p>	<p>1 Q. In that paragraph, do you state that there 2 had been no new entrants or that there have been 3 entrants in the ad exchange market in the last 4 12 years? 5 A. I state in that paragraph that there's been 6 no new entrants in the last 12 years. 7 Q. Is it your opinion that Google has had 8 monopoly power in the ad exchange market that you 9 define for multiple years? 10 A. Yes. 11 Q. Professor Gans, do you recall when Google's 12 counsel asked you about the date on which Google 13 obtained monopoly power in the publisher ad server 14 market that you define? 15 A. Yes. 16 Q. In your opening report, do you provide an 17 opinion on the timing of Google's monopoly power in 18 the publisher ad server market that you define? 19 A. Yes, I provide an opinion on the times of 20 that monopoly power. 21 Q. If we can go to Paragraph 353 of your report 22 and look at the Figure 9 that follows that paragraph. 23 Do you see what I am referring to? 24 A. Yes. 25 Q. In that Figure 9, do you provide a timeline</p>



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<p>1 for Google's monopoly power in the publisher ad server</p> <p>2 market that you define spanning 2011 to 2022?</p> <p>3 A. Yes, I provide information on the times that</p> <p>4 Google had monopoly power.</p> <p>5 MR. EWALT: Objection; form.</p> <p>6 Q. (BY MS. YOUNG) Professor Gans, do you recall</p> <p>7 when Google's counsel asked you the date on which</p> <p>8 Google obtained monopoly power in a small advertiser</p> <p>9 buying tool market that you define?</p> <p>10 A. Yes.</p> <p>11 Q. In your opening report, do you provide an</p> <p>12 opinion on the timing of Google's monopoly power in</p> <p>13 the small advertiser buying tools market that you</p> <p>14 define?</p> <p>15 A. Yes, I provide an opinion on the times.</p> <p>16 Q. Let's go to Paragraph 395 and look at the</p> <p>17 figure that follows that paragraph in your opening</p> <p>18 report.</p> <p>19 Do you see what I'm referring to?</p> <p>20 A. Yes.</p> <p>21 [REDACTED]</p> <p>22 [REDACTED]</p> <p>23 [REDACTED]</p> <p>24 [REDACTED]</p> <p>25 [REDACTED]</p>	<p>1 Do you see Paragraph 812?</p> <p>2 A. Yes.</p> <p>3 Q. Is that an example of an opinion of yours</p> <p>4 that Google's exchange fee is super competitive?</p> <p>5 A. Yes.</p> <p>6 Q. If you look at Paragraphs 813 and 815 that</p> <p>7 follow immediately after Paragraph 812 --</p> <p>8 A. Yes.</p> <p>9 Q. -- are those also examples of opinions of</p> <p>10 yours that Google's exchange fee is super competitive?</p> <p>11 A. Yes.</p> <p>12 Q. Professor Gans, do you recall when Google's</p> <p>13 counsel asked you about the contractual tying of AdX</p> <p>14 and DFP?</p> <p>15 A. Yes.</p> <p>16 Q. If we can go to Paragraph 444 of your opening</p> <p>17 report?</p> <p>18 A. Yep.</p> <p>19 Q. In that paragraph, do you opine whether DFP</p> <p>20 and AdX are two separate products or the same product?</p> <p>21 A. I state that they're separate products.</p> <p>22 Q. In Paragraph 446 of your opening report, do</p> <p>23 you describe the contractual tying of DFP and AdX?</p> <p>24 A. Yes.</p> <p>25 Q. Do you stand by that description here today?</p>
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<p>1 Q. That's okay. I will strike that question and</p> <p>2 move on.</p> <p>3 A. Thank you.</p> <p>4 Q. Do you recall when Google's counsel asked you</p> <p>5 whether you reached a conclusion on ad exchange fees</p> <p>6 being at, above, or below a competitive price?</p> <p>7 A. Yes.</p> <p>8 Q. Above competitive price is also referred in</p> <p>9 economic literature as super competitive price,</p> <p>10 correct?</p> <p>11 A. Yes. Yes.</p> <p>12 Q. Okay. Can your opinions on Google's exchange</p> <p>13 fee being super competitive be found within your</p> <p>14 original and rebuttal reports?</p> <p>15 MR. EWALT: Objection; form.</p> <p>16 A. Yes.</p> <p>17 Q. (BY MS. YOUNG) Do your opinions on Google's</p> <p>18 exchange fee being super competitive -- I'll strike</p> <p>19 that.</p> <p>20 Do your original and rebuttal reports contain</p> <p>21 opinions about Google's exchange fee being super</p> <p>22 competitive?</p> <p>23 A. Yes.</p> <p>24 Q. Let's go to Paragraph 812 of your opening</p> <p>25 report.</p>	<p>1 A. Yes.</p> <p>2 Q. In your opening report, do you opine that</p> <p>3 Google contractually tied DFP and AdX through a</p> <p>4 unified DRS contract?</p> <p>5 A. Yes.</p> <p>6 MS. YOUNG: I'm going to pass the</p> <p>7 witness at this time and reserve redirect and time at</p> <p>8 trial.</p> <p>9 MR. EWALT: Okay. Let's go off the</p> <p>10 record.</p> <p>11 THE VIDEOGRAPHER: Now going off the</p> <p>12 record. The time is 7:18.</p> <p>13 (Break from 7:18 p.m. to 7:25 p.m.)</p> <p>14 THE VIDEOGRAPHER: Now back on the</p> <p>15 record. The time is approximately 7:25.</p> <p>16 FURTHER EXAMINATION</p> <p>17 BY MR. EWALT:</p> <p>18 Q. Professor Gans, do you recall being asked</p> <p>19 questions about whether your methodologies for</p> <p>20 defining relevant markets could be tested?</p> <p>21 A. Just now, yes.</p> <p>22 Q. And you answered that your methodologies for</p> <p>23 testing -- for defining relevant markets could be</p> <p>24 tested, correct?</p> <p>25 A. Yes.</p>

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<p style="text-align: right;">Page 278</p> <p>1 Q. How would one test the application of the</p> <p>2 Brown Shoe factors to the definition of a relevant</p> <p>3 market?</p> <p>4 A. Oh, I interpreted testing as you could use</p> <p>5 those methodologies and apply them with relation to</p> <p>6 evidence is how I interpreted that question.</p> <p>7 And you could also take those</p> <p>8 methodologies and evaluate whether they were suitably</p> <p>9 applied in the circumstance.</p> <p>10 Q. How would you test whether those</p> <p>11 methodologies were suitably applied?</p> <p>12 A. There are various means. Depending on the</p> <p>13 context and the way that they were applied, et cetera,</p> <p>14 it was -- would involve examination of how that the</p> <p>15 preponderance of the evidence fit together to reach a</p> <p>16 conclusion. I -- I'm not quite sure what specific</p> <p>17 things you would do, just that they can be done that</p> <p>18 way.</p> <p>19 Q. Do you recall being asked questions about</p> <p>20 whether it was necessary to start with the competitive</p> <p>21 price when implementing the hypothetical monopolist</p> <p>22 test?</p> <p>23 A. Yes.</p> <p>24 Q. And I believe you testified that it is not</p> <p>25 necessary to start with the competitive price.</p>	<p style="text-align: right;">Page 280</p> <p>1 review documents and deposition testimony about those</p> <p>2 issues; is that right?</p> <p>3 A. Yes.</p> <p>4 Q. But you did not cite in your opening report</p> <p>5 or your rebuttal report any of those materials,</p> <p>6 depositions or documents, in support of your</p> <p>7 conclusions about the industry or public recognition</p> <p>8 of a market for advertiser buying tools for small</p> <p>9 advertisers, correct?</p> <p>10 MS. YOUNG: Objection; form.</p> <p>11 A. I was asked about were there other things</p> <p>12 that I reviewed that pertained to those, the -- the</p> <p>13 public recognition, and were supportive of it, and I</p> <p>14 said that I did. But I did not cite those in my</p> <p>15 report because -- well, I did not, yeah.</p> <p>16 Q. (BY MR. EWALT) And you did not rely on those</p> <p>17 documents and deposition testimony to support your</p> <p>18 opinions about industry or public recognition of a</p> <p>19 market for ad-buying tools for small advertisers,</p> <p>20 correct?</p> <p>21 MS. YOUNG: Objection; form.</p> <p>22 A. I -- I -- I didn't separately rely upon them.</p> <p>23 Q. (BY MR. EWALT) You didn't rely on them at</p> <p>24 all, did you?</p> <p>25 MS. YOUNG: Objection; form.</p>
<p style="text-align: right;">Page 279</p> <p>1 Is that fair?</p> <p>2 A. That is correct.</p> <p>3 Q. Would you agree that the standard way to</p> <p>4 implement the hypothetical monopolist test is to begin</p> <p>5 with the competitive price?</p> <p>6 MS. YOUNG: Objection; form.</p> <p>7 A. The standard way the hypothetical monopolist</p> <p>8 test is envisioned and taken is to -- is from the</p> <p>9 competitive price.</p> <p>10 However, given circumstances and data --</p> <p>11 and you'll recall we talked about unions of sets, I</p> <p>12 think. It's getting a little late. You can make</p> <p>13 inferences regarding the outcome of the hypothetical</p> <p>14 monopolist test without having a specific benchmark</p> <p>15 being derived.</p> <p>16 Q. (BY MR. EWALT) Could you please turn to</p> <p>17 Paragraph 233 of your opening report.</p> <p>18 A. Yes.</p> <p>19 Q. Do you recall that you were asked by counsel</p> <p>20 about whether you reviewed documents and deposition</p> <p>21 testimony about industry or public recognition of a</p> <p>22 candidate market for ad-buying tools for small</p> <p>23 advertisers?</p> <p>24 A. Yes.</p> <p>25 Q. And I believe you testified that you did</p>	<p style="text-align: right;">Page 281</p> <p>1 A. When I had a discussion with Professor</p> <p>2 Chandler about this, my impressions of his conclusions</p> <p>3 were not contradicted by other things that I had said</p> <p>4 and spoke to that.</p> <p>5 Q. (BY MR. EWALT) Is it your testimony that you</p> <p>6 relied on documents and depositions to support your</p> <p>7 conclusions about industry or public recognition of a</p> <p>8 market for small advertiser buying tools?</p> <p>9 A. No, the documents I relied upon are the</p> <p>10 documents that I listed as being relied upon in</p> <p>11 this -- these reports.</p> <p>12 Q. And you didn't rely on any for purposes of</p> <p>13 the industry or public recognition of an advertiser</p> <p>14 buying tool for small advertisers market?</p> <p>15 MS. YOUNG: Objection; form.</p> <p>16 A. I -- I didn't state -- list those documents</p> <p>17 as documents I relied upon.</p> <p>18 Q. (BY MR. EWALT) Could you please turn to</p> <p>19 Paragraph 372 in your opening report and Table 5 that</p> <p>20 follows?</p> <p>21 A. Yes.</p> <p>22 Q. Do you recall you were asked questions about</p> <p>23 whether Table 5 provides your views on monopoly power</p> <p>24 in the ad exchange market?</p> <p>25 A. Yes.</p>

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<p style="text-align: right;">Page 282</p> <p>1 Q. Is it your view that AdX had monopoly power</p> <p>2 in the ad exchange market each year between 2018 and</p> <p>3 2021?</p> <p>4 A. Yes.</p> <p>5 Q. In either of your reports, did you express an</p> <p>6 opinion as to whether AdX has or had monopoly power in</p> <p>7 any year other than the years 2018 through 2021?</p> <p>8 A. Yes. In my rebuttal report, I also included</p> <p>9 2022.</p> <p>10 Q. Okay. In your opening report and your</p> <p>11 rebuttal report, did you express an opinion about</p> <p>12 whether AdX has monopoly power in the ad exchange</p> <p>13 market in any years other than 2018 through 2022?</p> <p>14 A. I -- I didn't explicitly identify other</p> <p>15 years.</p> <p>16 Q. Could you please turn in your opening report</p> <p>17 to Paragraph 353 and Figure 9.</p> <p>18 A. Yes.</p> <p>19 Q. Do you recall you were asked questions about</p> <p>20 whether Figure 9 provides your views about monopoly</p> <p>21 power in the market for publisher ad service?</p> <p>22 A. Yes.</p> <p>23 Q. And I believe that counsel asked you about</p> <p>24 whether this Figure 9 provided your views about</p> <p>25 monopoly power in the years 2011 through 2022?</p>	<p style="text-align: right;">Page 284</p> <p>1 MR. EWALT: Object to form.</p> <p>2 A. Yes.</p> <p>3 Q. (BY MS. YOUNG) And do those materials contain</p> <p>4 some of the evidence that you relied upon in forming</p> <p>5 your conclusions in defining market -- markets in this</p> <p>6 case?</p> <p>7 A. I believe they do.</p> <p>8 Q. Okay.</p> <p>9 MS. YOUNG: Pass the witness.</p> <p>10 MR. EWALT: Thank you, Professor Gans.</p> <p>11 I have no further questions.</p> <p>12 THE WITNESS: Thank you.</p> <p>13 THE VIDEOGRAPHER: This is now the end</p> <p>14 of Video 7 of Joshua Gans. Off the record. The time</p> <p>15 is approximately 7:35.</p> <p>16 (The deposition concluded at 7:35 p.m.)</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p>
<p style="text-align: right;">Page 283</p> <p>1 A. I thought it was 2010 onwards.</p> <p>2 Q. Well, regardless of what your prior testimony</p> <p>3 was.</p> <p>4 A. Oh, okay.</p> <p>5 Q. Let me just ask you.</p> <p>6 A. Yes.</p> <p>7 Q. What years, if any, does Figure 9 indicate</p> <p>8 that AdX had monopoly power?</p> <p>9 A. Figure 9 indicates that it had monopoly power</p> <p>10 2010, 2011, 2012, 2015, 2017, 2018, and 2019.</p> <p>11 Q. Thank you, Professor Gans.</p> <p>12 MR. EWALT: I'll pass the witness.</p> <p>13 MS. YOUNG: Brief redirect.</p> <p>14 FURTHER EXAMINATION</p> <p>15 BY MS. YOUNG:</p> <p>16 Q. Professor Gans, in both your opening and</p> <p>17 rebuttal reports and your materials relied upon, there</p> <p>18 are a number of deposition testimonies cited from</p> <p>19 industry participants, including ad buyers,</p> <p>20 publishers, and competitors of Google, correct?</p> <p>21 MR. EWALT: Object to form.</p> <p>22 A. I believe so.</p> <p>23 Q. (BY MS. YOUNG) Yeah. And there are a number</p> <p>24 of documents cited in your materials relied upon,</p> <p>25 correct?</p>	<p style="text-align: right;">Page 285</p> <p>1 WITNESS CORRECTIONS AND SIGNATURE.</p> <p>2 Please indicate changes on this sheet of paper,</p> <p>3 giving the change, page number, line number and reason</p> <p>4 for the change. Please sign each page of changes.</p> <p>5 PAGE/LINE CORRECTION REASON FOR CHANGE</p> <p>6 _____</p> <p>7 _____</p> <p>8 _____</p> <p>9 _____</p> <p>10 _____</p> <p>11 _____</p> <p>12 _____</p> <p>13 _____</p> <p>14 _____</p> <p>15 _____</p> <p>16 _____</p> <p>17 _____</p> <p>18 _____</p> <p>19 _____</p> <p>20 _____</p> <p>21 _____</p> <p>22 _____</p> <p>23 _____</p> <p>24 JOSHUA GANS</p> <p>25 Job No. CS6922874</p>

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<p style="text-align: right;">Page 286</p> <p>1        SIGNATURE OF WITNESS</p> <p>2</p> <p>3        I, JOSHUA GANS, solemnly swear or affirm under the</p> <p>4 pains and penalties of perjury that the foregoing</p> <p>5 pages contain a true and correct transcript of the</p> <p>6 testimony given by me at the time and place stated</p> <p>7 with the corrections, if any, and the reasons therefor</p> <p>8 noted on the foregoing correction page(s), and that I</p> <p>9 am signing this before a Notary Public.</p> <p>10</p> <p>11</p> <p>12        _____</p> <p>13        JOSHUA GANS</p> <p>14        STATE OF _____ *</p> <p>15        COUNTY OF _____ *</p> <p>16        SUBSCRIBED AND SWORN TO BEFORE ME BY</p> <p>17 JOSHUA GANS on this, the ____ day of _____, 2024.</p> <p>18</p> <p>19</p> <p>20        _____</p> <p>21        Notary Public, State of Texas</p> <p>22        My Commission Expires: _____</p> <p>23        Job CS 6922874</p> <p>24</p> <p>25</p>	<p style="text-align: right;">Page 288</p> <p>1        employ of this attorney; and I certify that I am not</p> <p>2 interested in the cause, nor of kin or counsel to</p> <p>3 either of the parties.</p> <p>4        That the amount of time used by each party at</p> <p>5 the deposition is as follows:</p> <p>6        MS. YOUNG - 00:16:47</p> <p>7        MR. EWALT - 06:44:32</p> <p>8</p> <p>9</p> <p>10        GIVEN UNDER MY HAND AND SEAL OF OFFICE, on</p> <p>11 this, the 11th of October, 2024.</p> <p>12        _____</p> <p>13        MENDY A. SCHNEIDER, CSR, RPR</p> <p>14        Certification No.: 7761</p> <p>15        Expiration Date: 1-31-2025</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p>
<p style="text-align: right;">Page 287</p> <p>1        IN THE UNITED STATES DISTRICT COURT</p> <p>2        FOR THE EASTERN DISTRICT OF TEXAS</p> <p>3        SHERMAN DIVISION</p> <p>4        THE STATE OF TEXAS, et  </p> <p>5        al.,  </p> <p>6          Case No.</p> <p>7        Plaintiffs,   4:20-cv-00957-SD</p> <p>8         </p> <p>9        - against -  </p> <p>10         </p> <p>11        GOOGLE LLC,  </p> <p>12         </p> <p>13        Defendant.  </p> <p>14        _____</p> <p>15        THE STATE OF _____ :</p> <p>16        COUNTY OF _____ :</p> <p>17        I, MENDY A. SCHNEIDER, a Certified Shorthand</p> <p>18 Reporter in and for the State of Texas, do hereby</p> <p>19 certify that the facts as stated by me in the caption</p> <p>20 hereto are true; that the above and foregoing answers</p> <p>21 of the witness, JOSHUA GANS, to the interrogatories as</p> <p>22 indicated were made before me by the said witness</p> <p>23 after being first duly sworn to testify the truth, and</p> <p>24 same were reduced to typewriting under my direction;</p> <p>25 that the above and foregoing deposition as set forth</p> <p>in typewriting is a full, true, and correct transcript</p> <p>of the proceedings had at the time of taking of said</p> <p>deposition.</p> <p>I further certify that I am not, in any</p> <p>capacity, a regular employee of the party in whose</p> <p>behalf this deposition is taken, nor in the regular</p>	<p style="text-align: right;">Page 289</p> <p>1        GERALDINE YOUNG</p> <p>2        Geraldine.young@nortonrosefulbright.com</p> <p>3        October 11, 2024</p> <p>4        RE:    State Of Texas, Et Al. v. Google LLC</p> <p>5        10/10/2024, Joshua Gans (#6922874)</p> <p>6        The above-referenced transcript is available for</p> <p>7 review.</p> <p>8        Within the applicable timeframe, the witness should</p> <p>9 read the testimony to verify its accuracy. If there are</p> <p>10 any changes, the witness should note those with the</p> <p>11 reason, on the attached Errata Sheet.</p> <p>12        The witness should sign the Acknowledgment of</p> <p>13 Deponent and Errata and return to the deposing attorney.</p> <p>14 Copies should be sent to all counsel, and to Veritext at</p> <p>15 erratas-cs@veritext.com.</p> <p>16        Return completed errata within 30 days from</p> <p>17 receipt of testimony.</p> <p>18        If the witness fails to do so within the time</p> <p>19 allotted, the transcript may be used as if signed.</p> <p>20</p> <p>21</p> <p>22        Yours,</p> <p>23        Veritext Legal Solutions</p> <p>24</p> <p>25</p>